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PERSPECTIVE FROM SOUTHEAST—ORIGINAL DESIGN FOR WASHINGTON CATHEDRAL

HENRY VAUGHAN AND GEORGE F. BODLEY, R. A., ARCHITECTS

The CATHEDRAL of ST. PETER and ST. PAUL, WASHINGTON, D. C.

BY PHILIP HUBERT FROHMAN

Of the Firm of Frohman, Robb & Little, Architects

A FOREWORD

DURING the past two years the Editor of *THE AMERICAN ARCHITECT* has frequently asked for an illustrated article describing Washington Cathedral. To each of his requests I have replied that we should be glad to have such an article published as soon as our revised designs for the cathedral could be finished and we had pro-

duced sufficient drawings to illustrate the project in an adequate manner.

Recently, requests for an article and illustrations have become urgent and the Editor has informed me that he would like the first article to appear in *THE AMERICAN ARCHITECT* during April.

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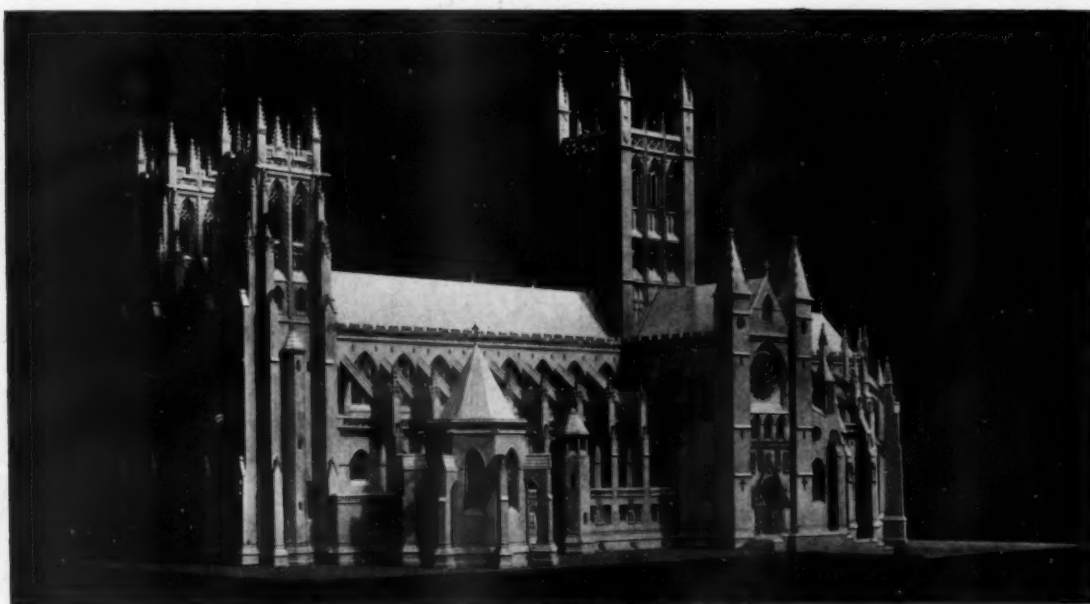
As he has assured me that he is not expecting anything in the nature of a formal and polished contribution to American literature, but merely an informal talk to my professional brethren, I have consented on condition that this "talk" can be given in installments and illustrated by material now available, the revised designs to be published in the second or third installment.

* * *

THIS first talk is to deal mainly with a comparison of Washington Cathedral and two other great cathedrals, New York and Liverpool, which have reached a somewhat similar stage of construction. In view of the fact

the sake of self-conscious cleverness and originality, as well as demonstrate the fact that there has been no sacrifice of genuine utility or structural efficiency for the sake of obtaining striking or unusual architectural effects.

In a subsequent number our working drawings for the crypts and sub-crypts will be published, showing that this is the most varied and complex ecclesiastical structure which has been attempted in modern times, as well as the fact that it will have a series of crypts and crypt chapels which are not surpassed in extent or solemnity by any medieval cathedral. The comprehensive scheme of symbolism for the sculpture of the superstructure including the vaulting bosses



MODEL OF ORIGINAL DESIGN FOR WASHINGTON CATHEDRAL

BY HENRY VAUGHAN AND GEORGE F. BODLEY, R. A., ARCHITECTS

View from Southeast, to be compared with revised design for baptistery published in this issue. In the revised design for South transept, a Western aisle has been added, aisle buttresses have been given projection beyond outer aisle walls and external stair turret has been eliminated. The towers have been given greater height and breadth

that we are not responsible for the original design by Messrs. George F. Bodley and Henry Vaughan, I shall endeavor to point out the admirable qualities of their design as well as certain defects which, had these great architects lived to carry out this work, they would in all probability have rectified. I shall also state why we deny any criticism that the executed work is to be a piece of cold archaeology and why we believe that the actual structure is and will be a vital and living work of Christian art.

In further installments we shall take up in detail certain problems of planning and design and shall show that there is no sacrifice of beauty for

of the choir aisles which have just been carved will also be described.

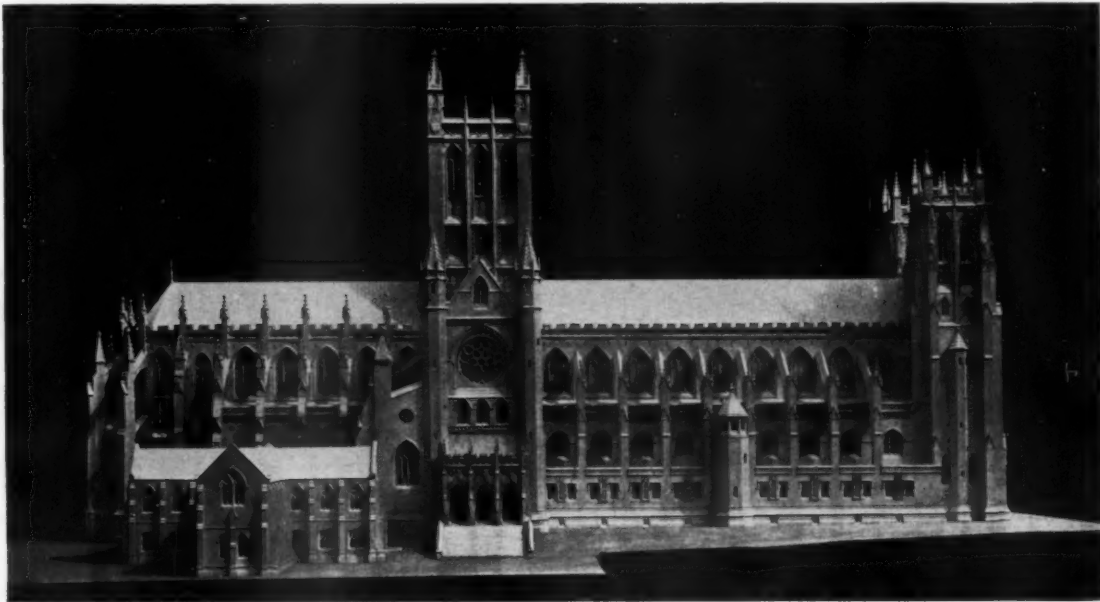
Having made all the computations required in the structural design of the cathedral, with the exception of the previously built apse and Bethlehem Chapel, I shall give detailed account of the methods of construction employed as well as of the methods of obtaining thrusts and counter thrusts of vaulting and flying buttresses, etc. In addition to this, if space permits, the systems of heating, ventilating, electrical lighting and control and provision for future electrical installation will be described.

While we regret that the publication of this talk

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could not be postponed until our completed revised designs could be shown, yet we trust that the accompanying illustrations will prove of sufficient interest to prevent this first installment from seeming altogether premature. Were we not pressed for time on the actual working drawings as well as on the designs for the various buildings to be constructed in the cathedral close, we would have been able to illustrate the subject in a more complete manner at this time. In a later issue we may take up the project as a whole and illustrate it by photographs of existing surrounding buildings as well as the Memorial Wing of

As the subject of this paper is Washington Cathedral we shall endeavor to adhere to our topic and shall not attempt to describe the other two great cathedrals, as they have been very fully and ably described by their architects and various writers and the readers are doubtless familiar with them from the numerous illustrations which have appeared in our architectural magazines from time to time. However, it is difficult to lay stress upon the distinguishing characteristics of Washington Cathedral without a comparison with certain outstanding qualities of other notable cathedrals.



NORTH VIEW OF MODEL OF ORIGINAL DESIGN FOR WASHINGTON CATHEDRAL

BY HENRY VAUGHAN AND GEORGE F. BODLEY, R. A., ARCHITECTS

the Cathedral Library now building, together with the preliminary drawings for the Administration Building, Synod Hall, and various institutional buildings and residences for the clergy, which will be built from time to time.

There is so much to tell about Washington Cathedral in this first talk that it is difficult to know just where to begin. Suppose, therefore, we discuss the distinguishing characteristics of the two other cathedrals mentioned above, as a basis of comparison for a discussion of certain fundamentals of the design of Washington Cathedral, before going on to facts and figures concerning the history and present development of the project as well as such tangible things as the dimensions of a structure which is a tangible manifestation of a spiritual power and of ideals which are incommensurate.

That a new age of cathedral building is already at hand would seem to be indicated by the fact that the three most notable cathedrals now under course of construction are the greatest and most monumental Gothic churches which have been built since the Middle Ages. The cathedrals referred to are those of Liverpool, St. John The Divine, New York, and Washington Cathedral.

In point of mere size these cathedrals are excelled by St. Peter's, Rome, but in those qualities which make a building great as a work of religious art and which are manifestations of spiritual power, they all will be greater than St. Peter's. They are in fact the antithesis of St. Peter's as well as of all Renaissance churches. St. Peter's stands for an increase in the temporal power of the Church but marks a decline in its spiritual power. Liverpool, New York and Washington

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are manifestations of the dawn of a spiritual awakening and a decline of those forces of materialism which found such apt expression during the Renaissance. Not only in certain features of architectural style, but in their manifestation of spiritual power, are these three great structures akin to the Norman and Gothic cathedrals and abbeys of the early Middle Ages.

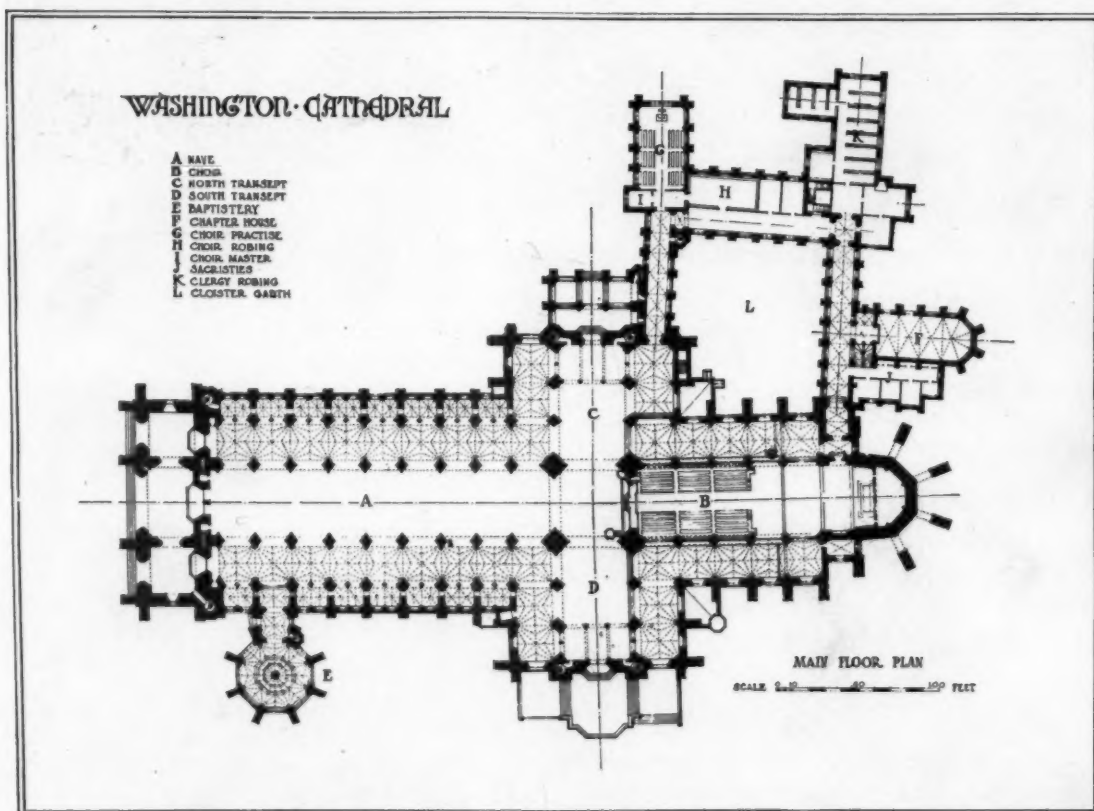
Liverpool Cathedral is the masterpiece of a genius. Thus far it shows throughout the remarkable creative ability of one man. While it might be likened unto a plant which has grown from the parent seed of Gothic art, yet it is a plant of a new variety both in the structure of its organism as well as in its flower of detail.

Although the Lady Chapel possesses many elements of originality in detail, yet its interior especially impresses one as having that type of spiritually uplifting beauty which one finds in the Gothic churches of the Middle Ages. In the choir, crossing and transepts just completed one finds a distinct departure from medieval tradition and almost a new type of beauty evolved. One is quite overwhelmed by the colossal scale of its parts and is fascinated by the vitality of its detail. While we are full of admiration at the

daring of the whole scheme as well as for the remarkable genius of its architect, yet it would seem that beauty has been sacrificed to originality in many instances. Irrespective of their impressive size and dominating proportions, we do not feel that the choir, crossing and transepts rise quite as high in the scale of beauty as the comparatively small but exquisite Lady Chapel.

It is all very impressive and very wonderful, but after one's first enthusiasm for its vastness and originality has subsided, the question arises as to whether this type of cathedral is as beautiful as the medieval type, whether its structural organism is as logical and whether certain interesting and unusual motives in its detail are as satisfying. While the medieval cathedrals show creative ability at each turn, yet the personality of the designer seems at all times to be subordinated to the real purpose of the structure as a manifestation of something far greater than the genius of man.

As an architectural achievement Liverpool Cathedral is greatly to be admired. It also has those fundamentals of grandeur and nobility of design and monumental construction which will make the completed structure awe-inspiring to a



REVISED MAIN FLOOR PLAN OF CATHEDRAL AND ADMINISTRATION BUILDING



AIRPLANE VIEW OF FOUNDATION AND CHOIR CONSTRUCTION TAKEN IN WINTER OF 1922

marked degree, and worthy to take its place as one of the greatest cathedrals of the world. However, this cathedral like some other very interesting modern ecclesiastical work does impress us with the modern trend toward self-expression of the individual, rather than the medieval spirit of self-forgetfulness in the endeavor to express something greater than oneself. In the case of Liverpool Cathedral a new solution of an old problem has been accomplished with masterly skill and the facility of one who has at his finger tips the whole vocabulary of detail of Gothic art.

In spite of a departure from traditional types, and crudities of detail, the original design for New York Cathedral was akin to the medieval cathedrals in this respect, namely: that it was to be monumental in size and construction and that it reflected the spirit of the time. Its architectural style showed the strong influence of Richardsonian Romanesque, together with a certain liking for English perpendicular Gothic window tracery, combined with the desire to be original and American. In spite of the disap-

pointment which one felt at the design on paper, yet as the structure took form in enduring stone, one was impressed by the fact that it would possess that monumental quality of all real architecture.

It was not to be a sham or makeshift, but was to be a real cathedral, a great temple built to the glory of God and would be an enduring witness to our faith for centuries to come. As the huge bulk of choir and crossing now stands, it demonstrates the fact that in spite of certain architectural shortcomings, the spirit which lay behind this undertaking was absolutely right. It stands not as an ignoble failure, but rather as a glorious failure which will be redeemed and transformed into the ultimate success which its founders hoped for. When completed, this cathedral will symbolize the fact that where the right motive lies back of our human endeavors our mistakes are eventually overruled by Divine guidance. The seeds of ultimate victory are often planted during the plowing of a harrowing defeat. Even so, the future beauty of the completed New York Cathe-

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dral may be sensed from the flowering of those seeds which were planted within the protection of the great buttresses of the apse. I speak now of those apsidal chapels designed by that great and always modest architect, Henry Vaughan, as well as one chapel designed by Dr. Cram, the present architect of the cathedral. The former three chapels are beautiful and scholarly examples of 14th Century English Gothic and quite char-

solution of a difficult problem and we hope that the original choir and crossing may be remodeled in some manner similar to their suggestions. While some have questioned the reasonableness of employing French Gothic for an Anglican cathedral, yet we are filled with admiration at the beauty and impressiveness of the proposed nave and West front. In the evolution of an organism different from the medieval type,



PERSPECTIVE OF DESIGN BY FROHMAN, ROBB & LITTLE, ARCHITECTS, FOR THE CHAPEL OF THE RESURRECTION

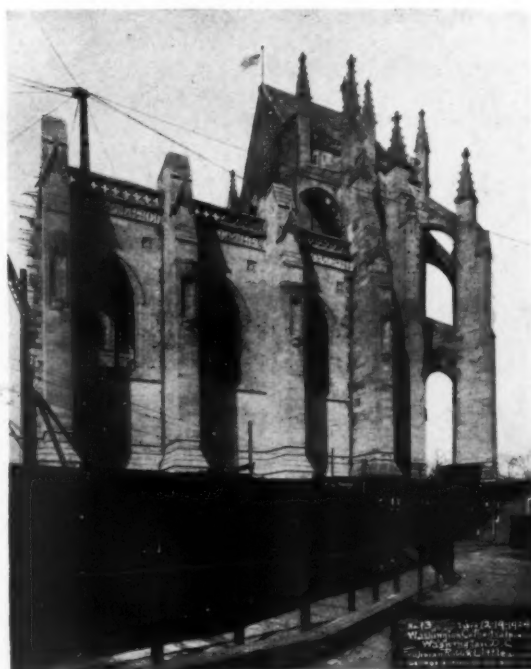
This chapel, now under course of construction, is one of the crypt chapels not contemplated in the original plans. Its Norman architecture was largely determined by the proportions of the space available beneath the South transept, as well as by the required massiveness of the construction. The entire vaulted ceiling of brick plastered, is to be decorated in color and gold. In the drawing this decoration is only suggested in the sanctuary

acteristic of their architect. The last mentioned chapel is a vigorous and refined example of French Gothic, quite different in style from Dr. Cram's previous work. As this chapel is explicitly French by reason of its dedication, there is a *raison d'être* for its architectural style. In general, Messrs. Cram & Ferguson's revised design for the nave of New York Cathedral is a masterly

New York Cathedral is akin to Liverpool, but we feel that the revised design for the nave is superior to the general order of Liverpool Cathedral, both in points of logic and in beauty. The new nave is a serious solution of the problems presented by the necessities of adjusting the new design to certain determined proportions of the executed work. In this instance there were rea-

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BELOW: RECENT CON-
STRUCTION PHOTOGRAPH
—VIEW FROM NORTH
SHOWING APSE AND
CHOIR CONSTRUCTION



AT LEFT: RECENT CON-
STRUCTION PHOTOGRAPH
OF SOUTH CHOIR AISLE,
SHOWING APSE IN BACK-
GROUND



WASHINGTON CATHEDRAL

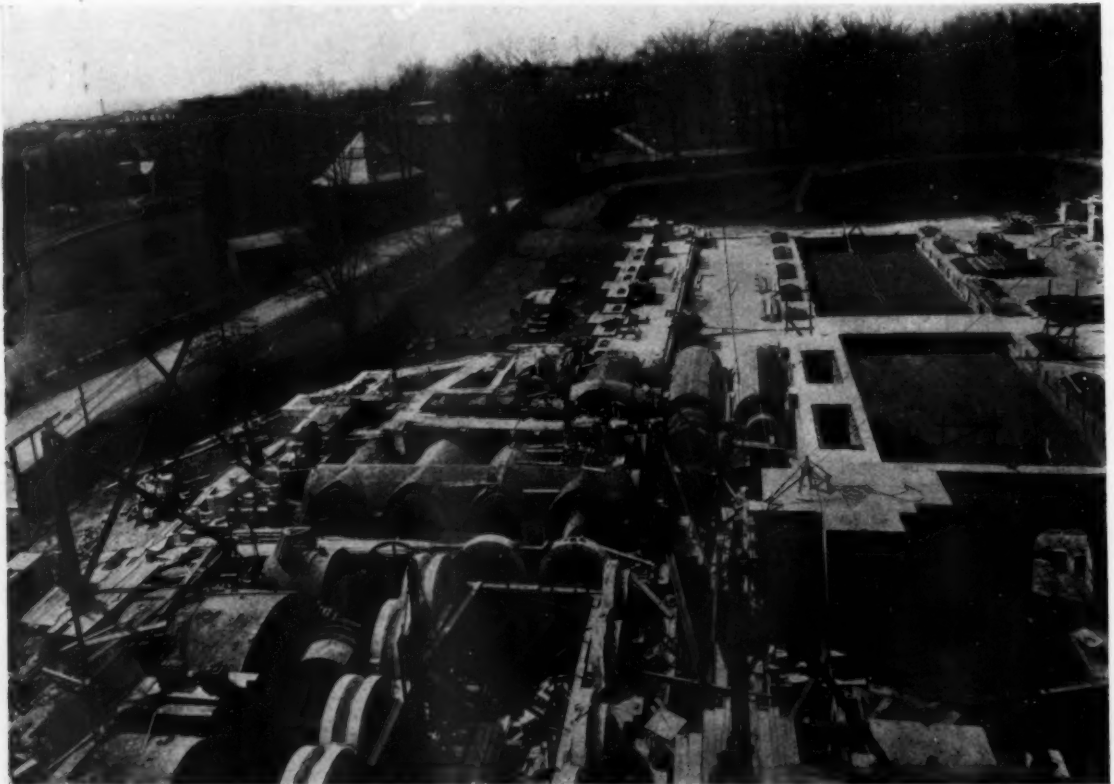
HENRY VAUGHAN, ARCHITECT UNTIL 1917—FROHMAN, ROBB & LITTLE, ARCHITECTS SINCE 1919

CRAM & FERGUSON, CONSULTING ARCHITECTS

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sons why it seemed advisable to discard the medieval type and devise a system without a nave clerestory. This has been accomplished with marked success both internally and externally. There is no forced attempt at originality, though traditional forms are being employed in an unusual but logical manner which is truly Gothic. The design for the West front is quite glorious and if its details are designed and executed in the spirit in which the preliminary elevations and

medieval type with a clerestory in choir, transepts and nave. The internal order of Liverpool is striking and unusual but we do not feel that its internal effect with dark triforium in place of a clerestory and its principal source of light being from the windows of the barrel-vaulted aisle, so far below the main vault, is as beautiful and uplifting as a clerestoried interior. In the interior of New York Cathedral, we approach more nearly to the ideal lighting of a medieval cathedral as



RECENT CONSTRUCTION PHOTOGRAPH OF CRYPTS BENEATH SOUTH TRANSEPT

This shows brick vaulting of ante chapel and stone arches of Chapel of the Resurrection

perspective drawings were conceived, it will be one of the finest Gothic façades in the world. Thus far the central tower with its spire is still an unsolved problem. As the alternative schemes which Dr. Cram has suggested are a decided improvement on the original scheme, let us hope that this problem will be solved eventually in as successful a manner as the nave and West front.

If the distinguishing characteristic of Liverpool Cathedral is originality, and of New York Cathedral, diversity, that of the original design for Washington Cathedral is conservatism. One of its marked differences from Liverpool and New York is due to the fact that it belongs to the typical

the main aisles are as high as the nave and have lofty clerestory windows which will admit a sufficient amount of light at the proper level. Even so, the effect of the clerestory light coming from outside of the main columns of the nave arcade does not seem to us to be quite as perfect as the scheme which was given the greatest favor by the medieval builders of France and England. It reminds one more of the great "hall type" of church to be found in Germany.

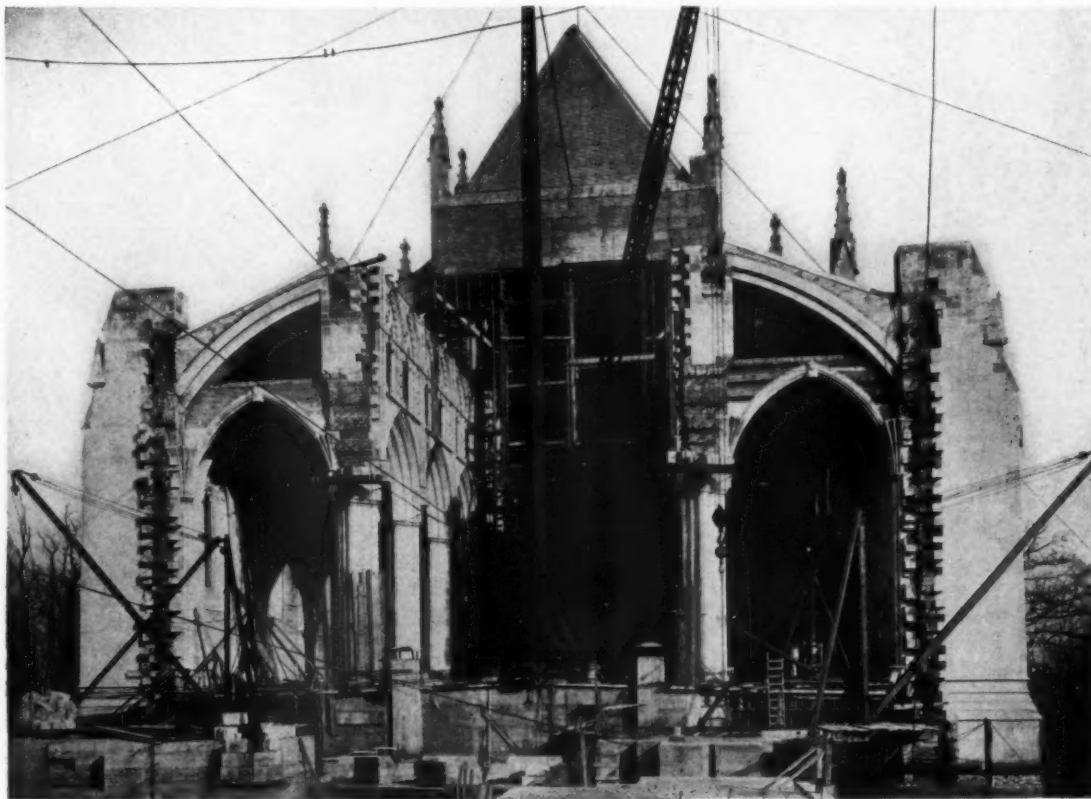
The proportions and general order of the interior of the nave as shown in Messrs. Bodley and Vaughan's original design for Washington Cathedral are, to our way of thinking, quite above

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criticism. In the general design and proportions of clerestory, triforium and nave arcade, it seems to us that they have reached the high-water mark of English Gothic, and that if we can achieve the interest and refinement of detail at which we are aiming, this nave will not have an equal among any of the English cathedrals.

In its great length its interior is typically English, ranking with such interiors as Westminster Abbey, York Minster, Canterbury and Winchester. It will be excelled in length only by the last

Minster which are approximately six feet higher. Although not as lofty as the greater French interiors, yet in its proportions of the ratio of width to height it is almost French. In area it exceeds any English Gothic cathedral with the exception of Liverpool, and compared with European cathedrals, its area is greater than that of Rheims, Amiens or Cologne but less than Milan or Seville. Combined with its 14th Century Gothic detail, its distinctively English length and a loftiness which is almost French, is a massiveness of wall



CHOIR NOW UNDER COURSE OF CONSTRUCTION, SHOWING INTERNAL FLYING BUTTRESSES. THE MAIN FLYING BUTTRESSES WILL BE EXPOSED AT A HIGHER LEVEL ABOVE THE AISLE ROOFS

named cathedral. It is therefore longer than any of the French cathedrals. In most of its dimensions it will be excelled by Liverpool and New York, although due to the small and more typically Gothic scale of its parts, we believe that the exterior will appear to be as dominating, and the interior will seem to be quite as vast. In a subsequent issue we may show diminutive plans of these three cathedrals at the same scale in order that their various dimensions may be compared. [The internal height of Washington Cathedral is greater than that of any of the English cathedrals with the exception of Westminster Abbey and York

and a sturdiness of pier, which is quite Norman.) An actual comparison of the thickness of walls and diameters of piers will show that it compares in these respects with such structures as Durham, Peterborough and Ely.]

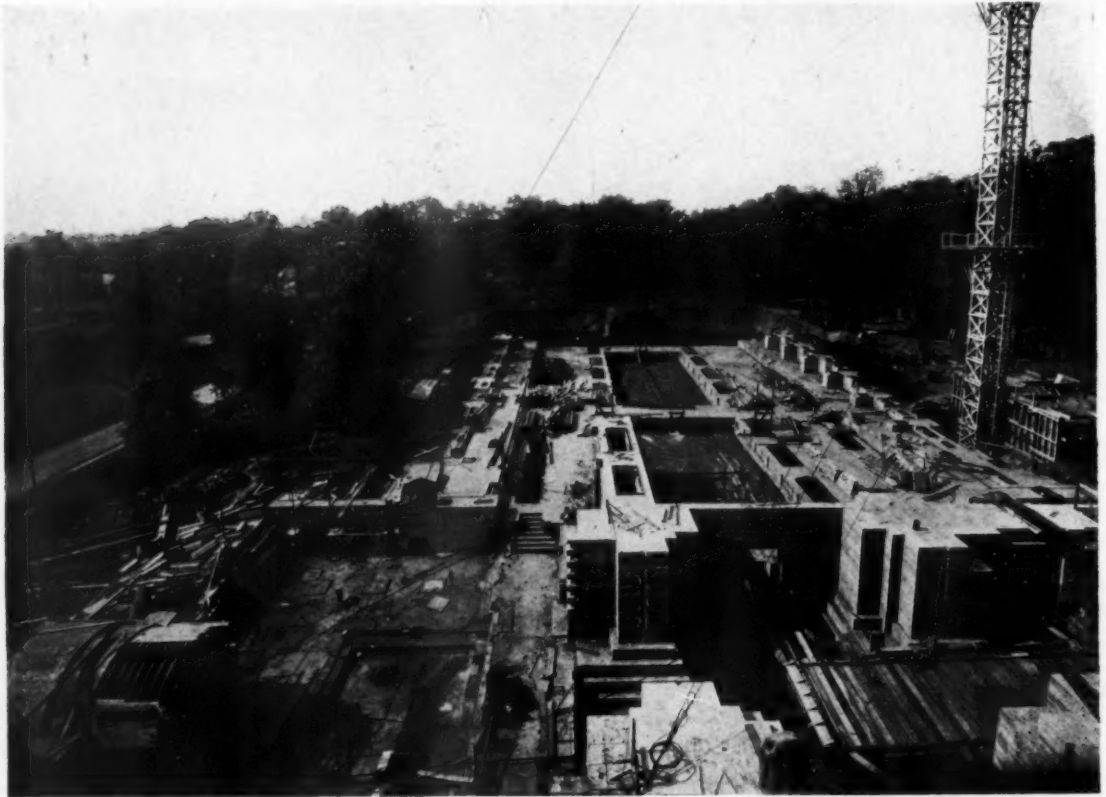
[Much as we admire the logic of French Gothic from an engineering standpoint, the awe-inspiring height and the beauty and vigor of French Gothic detail at its best, yet we cannot but feel that externally the English type of cathedral is a finer composition. If one deems the greatness of a cathedral to be commensurate with its height, one might claim that there are no great Gothic cathe-

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drals in England. Compared with the loftiness of the French cathedrals, the average English cathedral is low and humble. Despite this quality of humility and also in some measure because of it, there are elements of true greatness to be found in English Gothic. While the English cathedrals have not the internal beauty of proportion nor the consistency and harmony of detail to be found in the best French examples, yet they have that type of beauty and strength which is to be found in the character of a man who is both great, humble and

of diminishing this quality in favor of a lighter and more ambitious scheme, we shall make every effort to lay stress on this noble quality as symbolizing the strength of the church and its guidance toward the Life Eternal.

We feel that the general scheme of the composition of the original design is right, not merely because it is true to an historic type, but because the typical English scheme of dominating central tower with lesser western towers is precisely the most effective crowning feature for Mt. St. Alban.



CONSTRUCTION VIEW OF COMPLETION OF CONCRETE FOOTINGS AND FOUNDATION WALLS AND BEGINNING OF PRESENT CRYPT CONSTRUCTION

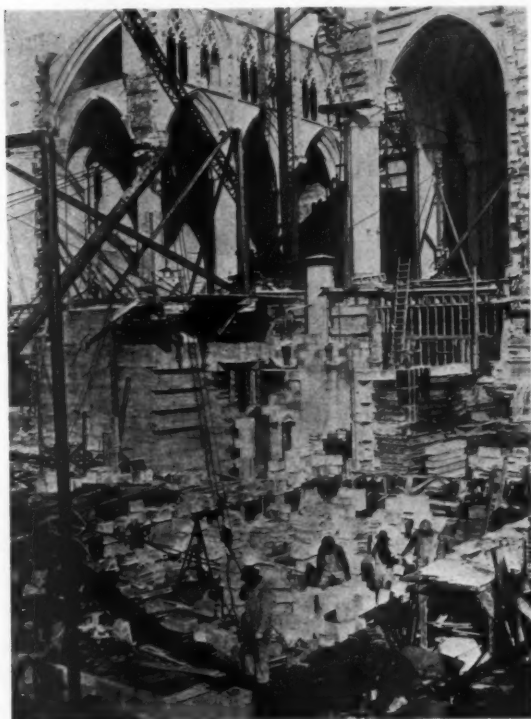
Beneath the concrete floors shown is the "sub-crypt," a complex system of corridors, ducts and heating chambers

strong. Although the French cathedral may express in greater measure the power and majesty of God, while the English cathedrals may appear to symbolize to a greater extent His gentleness and loving kindness; yet in the sturdiness of some of the English Norman cathedrals, such as Durham, one can find the Might and Majesty of God exemplified in a manner which, to some, is quite as impressive as the soaring loftiness and grandeur of Amiens and Rheims. We believe that Messrs. Bodley and Vaughan were quite right in retaining the Norman quality of sturdiness, and instead

Undoubtedly a cathedral such as Chartres or Notre Dame is beautiful from all points of view; nevertheless, were such a cathedral to be placed on the top of Mt. St. Alban it would seem to be turning its back upon the City of Washington. Viewed from a lower level and from the northeast or southeast, most of the French cathedrals seem to be rather high-shouldered in proportion to the height of their western towers or spires, and they seem to need a single dominating mass such as a central tower, either with or without a spire. In this instance the adherence to the typically Eng-

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BELOW: EXTERIOR
WALLS OF CRYPT BE-
NEATH WESTERN AISLE
OF SOUTH TRANSEPT
WITH PRESENT CHOIR
CONSTRUCTION IN BACK-
GROUND. INTERIOR OF
THIS PORTION OF THE



CRYPT IS SHOWN BY
ACCOMPANYING INTERIOR
CONSTRUCTION PHOTO-
GRAPHS. AT LEFT:
STARTING TO SET STONE
IN THE CHAPEL OF THE
RESURRECTION BENEATH
SOUTH TRANSEPT



WASHINGTON CATHEDRAL

FROHMAN, ROBB & LITTLE, ARCHITECTS

CRAM & FERGUSON, CONSULTING ARCHITECTS

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lish form is not a question of archaeological correctness, but is merely one of determining the proportions and composition of a structure by the requirements of its purpose and environment.]

Liverpool, New York and Washington cathedrals show a similarity of motif on the part of their architects, in that their aim has been to produce a composition which would be beautiful

size. It is only in portions of cathedrals, abbeys and parish churches here and there, and in various details that we begin to realize the possibilities of this style.

Twelfth Century Gothic culminated in the 13th Century, which is to be regarded in many ways as the high-water mark of Gothic architecture. In the 14th Century we find an influence at work endeavoring to develop 13th Century Gothic into something more mobile and more ideal. Unfortunately this promise was never fulfilled as the vitality of Gothic art began to ebb ere this ideal was realized. In France the strength of Gothic was dissipated in the fascinating futilities of the flamboyant style, while in England its life congealed into the formal rigidity and multiplicity of vain repetitions of the perpendicular style. Unlike preceding periods, 14th Century Gothic died before it flowered.

Here, in Washington Cathedral we have the unprecedented and unrivaled opportunity of building a great 14th Century English Gothic Cathedral, of drawing inspiration from the beginnings of Gothic architecture in the Norman,



RECENT CONSTRUCTION PHOTOGRAPH OF CRYPTS

Ante chapel looking North toward Ambulatory South of Crossing

and effective from every point of view. The final result in these three cases has been a dominating central feature. In our estimation Washington Cathedral is the most satisfying composition of the three, not because it is more like a typical English cathedral, but because its proportions and composition approximate more nearly to the ideal type.

That 14th Century English Gothic was selected as the architectural style for Washington Cathedral seems to us to be particularly fortunate for several reasons. This style represents English Gothic at its highest point of development, it represents the English church at a time before decadence had set in, either in matters ecclesiastical or architectural. It, therefore, seems to be particularly appropriate for a modern cathedral of the Church which is so distinctly Anglican in its derivation. Strangely enough, and in spite of the great possibilities of beauty in this period of architecture, there is no such thing as a consistent example of 14th Century English Gothic to be found in any great church of cathedral rank or



VAULTING OF SOUTH CHOIR AISLE RECENTLY COMPLETED

FROHMAN, ROBB & LITTLE, ARCHITECTS
CRAM & FERGUSON, CONSULTING ARCHITECTS

and of grafting on to this strong tree the flower-like beauty of detail of the 14th Century. In so doing we are endeavoring to realize an ideal dimly foreshadowed in the 14th Century, and hope that we may be able to achieve that which may be a stepping-stone to a development of Gothic archi-

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ture in the future—which will be greater and more beautiful than any single period of the past. Therefore, we feel that it is fortunate that 14th Century English Gothic was selected as the architectural style for this cathedral, and trust that we may be enabled thereby to have some part in rekindling the fire of a great art which was extinguished in the 15th Century.

In a subsequent paper we shall describe and enumerate the revisions which we are now making in the original design and which are being incorporated in the actual structure. All of those revisions which have had an effect upon the floor plan it was necessary to determine about three years ago before preparing working drawings for the concrete foundations of the entire structure which have been recently completed. The

major revisions affecting these plans are the addition of western aisles to the transepts, changes in the dimensions of the west front, and the employment of the medieval refinements in deviations from straight lines and right angles, as well as an increase in the height of the central tower with a resulting increase in the area of its footing.

In the original plans the present extensive series of crypts and crypt chapels were not contemplated. It was necessary to design these before preparing foundation plans. Our first designs for these crypts were revised in detail before the present crypt construction was undertaken. We shall not attempt to describe these crypts at present, but are accompanying this article with a few construction photographs. The interior crypt views are of the ante-chapel which is an ambula-



DRAWING OF CHOIR LOOKING WEST, BY FROHMAN, ROBB & LITTLE, ARCHITECTS, 1919

On the extreme right is a portion of the sanctuary completed in 1918. Three bays of the choir have just been built up to the top of the triforium. The foundations for the entire cathedral were completed in 1923. The crypts beneath crossing and transepts are now building

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tory leading into the Chapel of the Resurrection. The forms and centers for the brick and tile vaulting were removed just before these photographs were taken. The brickwork shown is to be plastered. Why we have employed this simple transitional style for the ante-chapel, why the Chapel of the Resurrection is to be Norman, and why other portions of the crypts will vary in style from the simplest Norman to 14th Century Gothic, are questions which we shall answer in the paper concerning these crypts, which will appear when this work is sufficiently finished to illustrate the subject with adequate photographs. Suffice it to say that these changes in style are not due to mere caprice or fancy but that there are reasons, and valid ones, architectural, structural and economic.

We herewith present illustrations of our revised designs for the interior of the superstructure. These views are from water color drawings by E. D. Robb, and a pen and ink and wash drawing by the writer. Our revised designs for the interior were developed in advance of our revisions to the exterior, for the simple reason that as Gothicists, we have endeavored to perfect the interior first, wishing to develop the exterior as a logical expression of the interior.

As we are now preparing the final working drawings the interior design is being further refined and we trust that the actual result will be superior to the perspective drawings.

We wish to add that Messrs. Bodley and Vaughan's conception should not be judged too critically from the model, as it was completed shortly before Mr. Vaughan's death. It is merely an unstudied enlargement of their small scale preliminary drawings. From the refinement of detail which was characteristic of Dr. Bodley's and Mr. Vaughan's work, we are quite sure that the executed structure would not have had any of its obvious defects.

Although we feel that a publication of the drawings for the exterior would be premature at this time, as there are many questions of detail which are requiring further restudy, yet we present two illustrations showing revisions in the external design, rather in the nature of a foretaste of what is to come. These designs are for the Baptistry and for the North Transept. A comparison of these perspective drawings with the accompanying photographs of the model showing these same features, will suffice it to give one some idea of the revisions now taking place in the external design as a whole.

PARIS VOTES HUGE SUM FOR FLOOD PROTECTION

THE Paris municipal council has recently voted for the expenditure of 120,000,000 francs for the protection of the capital against the periodic overflows of the Seine River, states *Engineering News-Record*. In October, 1924, the gauge at the Pont d'Austerlitz marked 7.32, which was less than a meter below the high water of 1910 which caused millions of francs' damage. Choisy-le-Roi, above Paris, and Courbevoie, below, are to be included in the new scheme. Independent of the all-inclusive plan the lower Seine will be dredged that it may more readily carry off the flood and the Marne above Paris will henceforth pass the bulk of its flood water into a diversion canal outside the walls of Paris. The study and experiment already made has cost the sum of 2,200,000 francs. The diversion of the Marne will cost a billion francs, which is the more to be remarked in that it will serve no useful industrial or commercial purpose as now foreseen. In addition, 120 million francs is to be expended by the Prefecture of the Seine in the construction of

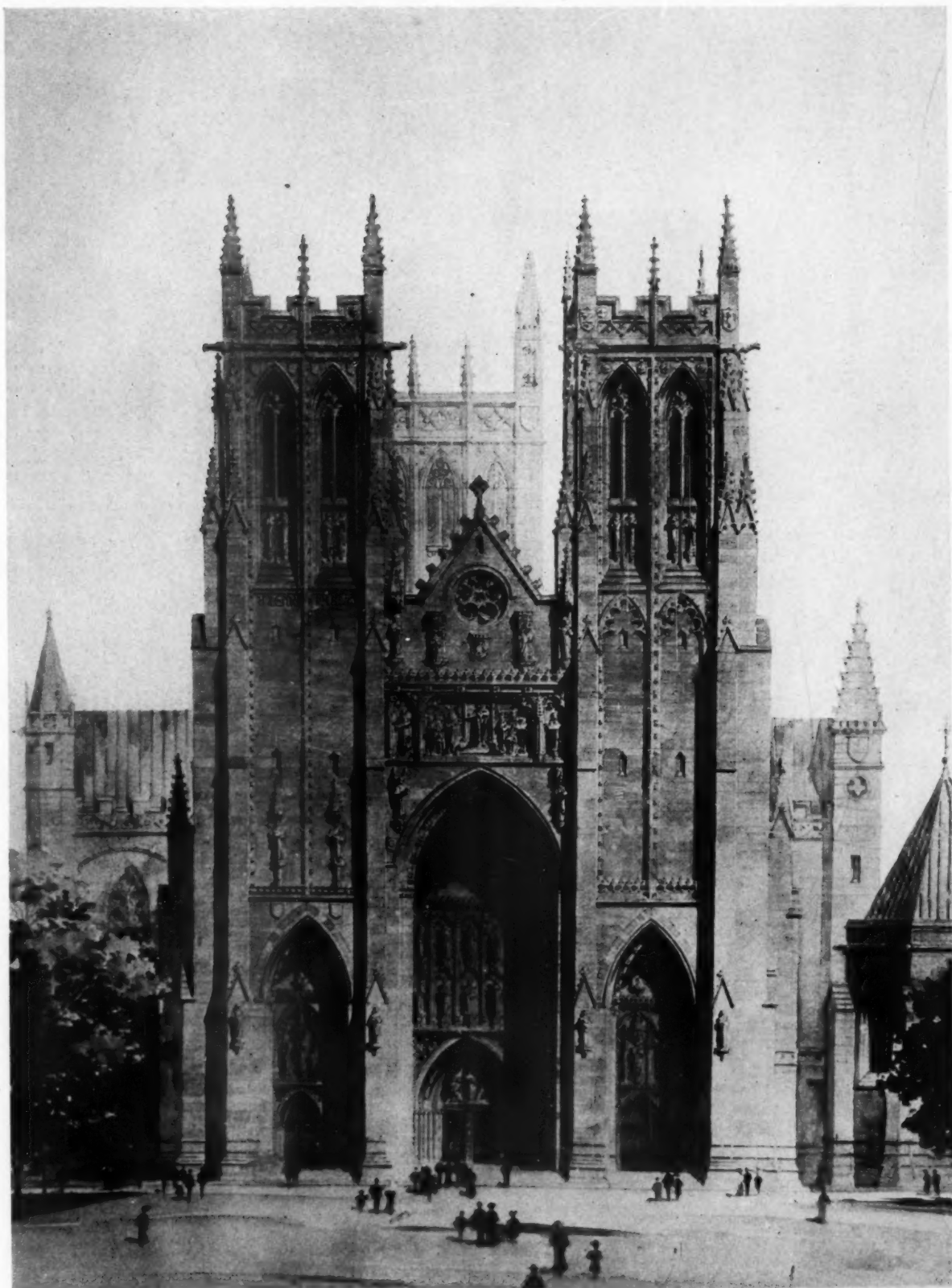
two reservoirs in the Morvan and one in Champagne for the conservation of Seine water which feeds Paris when at flood time the whole flow is turned around Paris.

STATE COLOR ACCORDING TO JOHN SLOAN

JOHN SLOAN, president of the New York Society of Independent Artists, has set up the contention that every American city has a color peculiar to itself.

Philadelphia, Mr. Sloan claims, is a town that is one harmony of Quaker gray. Gloucester, Mass., where fish come from, is blue. Santa Fé and all New Mexico is "a restless ocean of gravel mottled with desert-defying green."

When it comes to assigning a color to New York, Mr. Sloan is hopelessly lost. New York is so thoroughly cosmopolitan, so overcrowded with people of many tongues as to have lost a real color suggestion and the separate colors that might be assigned to each of the many nations and sects, when combined, result, says Mr. Sloan in a neutral gray.

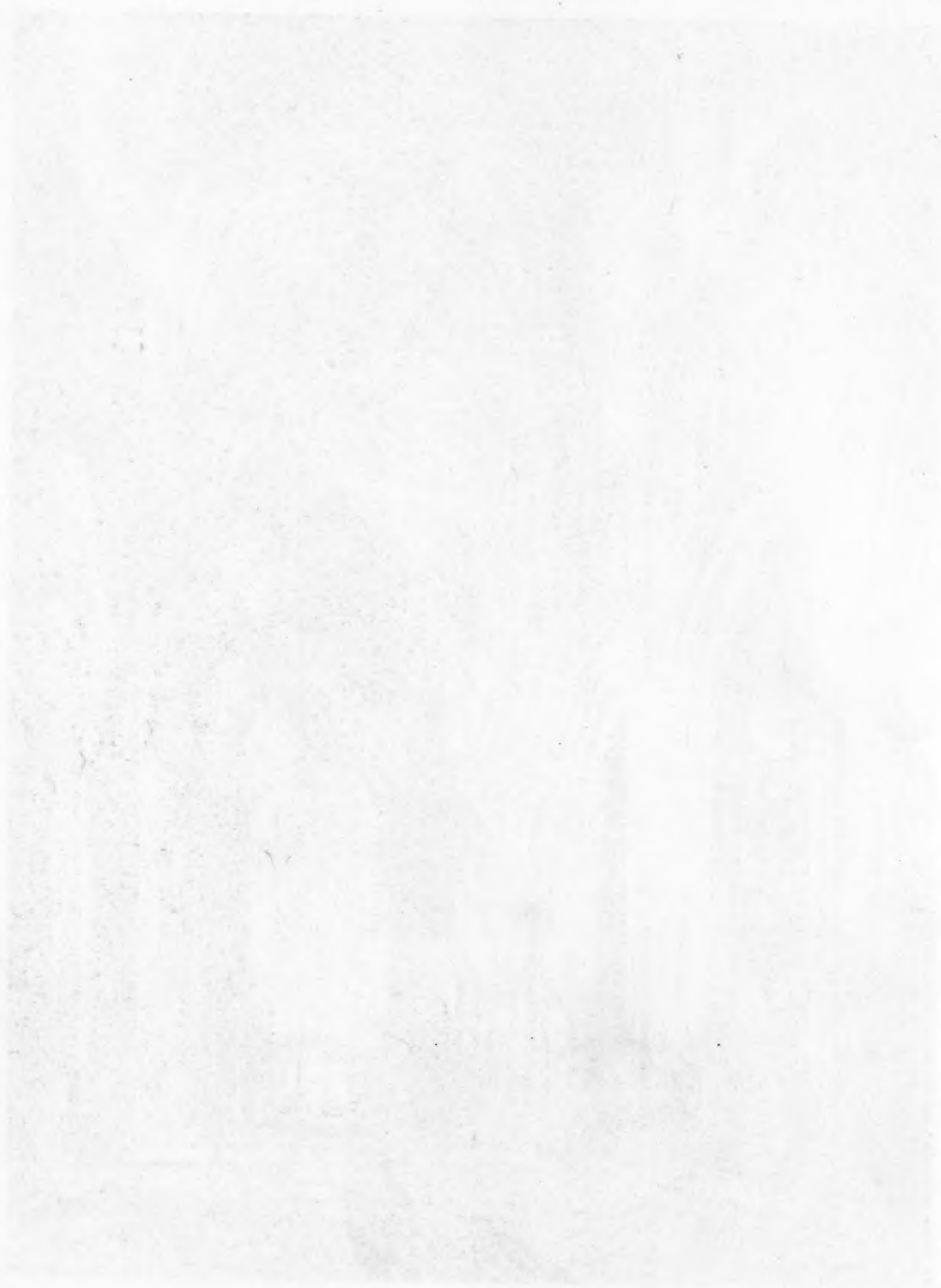


WASHINGTON CATHEDRAL—ORIGINAL DESIGN FOR WEST FRONT

BY HENRY VAUGHAN AND GEORGE F. BODLEY, R. A., ARCHITECTS

This design was slightly modified by Mr. Vaughan, and was further revised by the present architects before foundations were built. After it has received further study, the final design will be illustrated in *THE AMERICAN ARCHITECT*

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WASHINGTON CATHEDRAL—NAVE LOOKING EAST

ORIGINAL DESIGN FOR NAVE—HENRY VAUGHAN AND GEORGE F. BODLEY, R. A., ARCHITECTS

In their working drawings the present architects are following the proportions as well as the architectural style and spirit of this fine nave

THE AMERICAN ARCHITECT
April 22, 1925. Plate 98





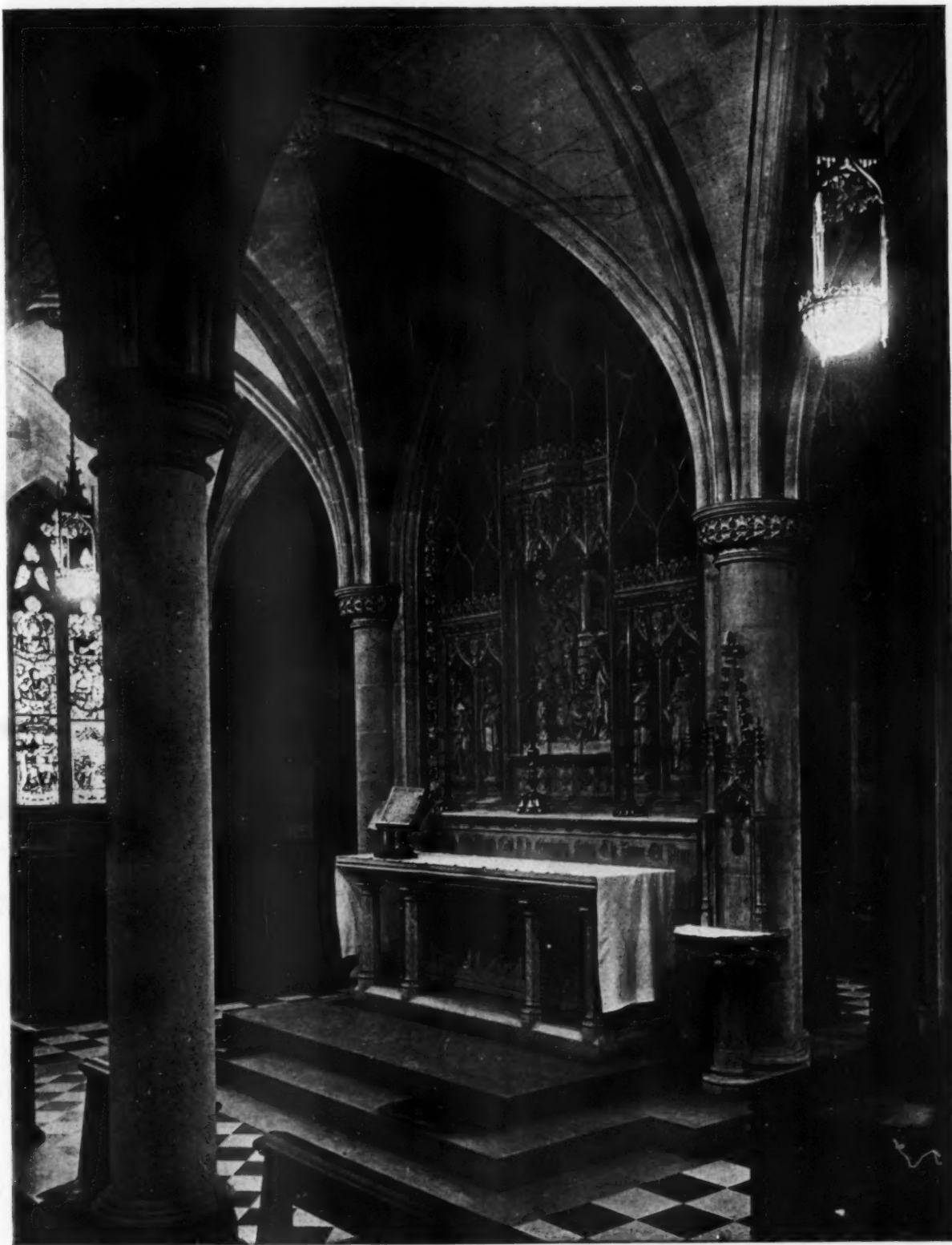
WASHINGTON CATHEDRAL—THE BETHLEHEM CHAPEL

HENRY VAUGHAN, ARCHITECT

All cathedral services are now held in this chapel, which was the only crypt chapel originally contemplated. The lightness and grace of this interior hardly suggest that it is in the crypt beneath the apse

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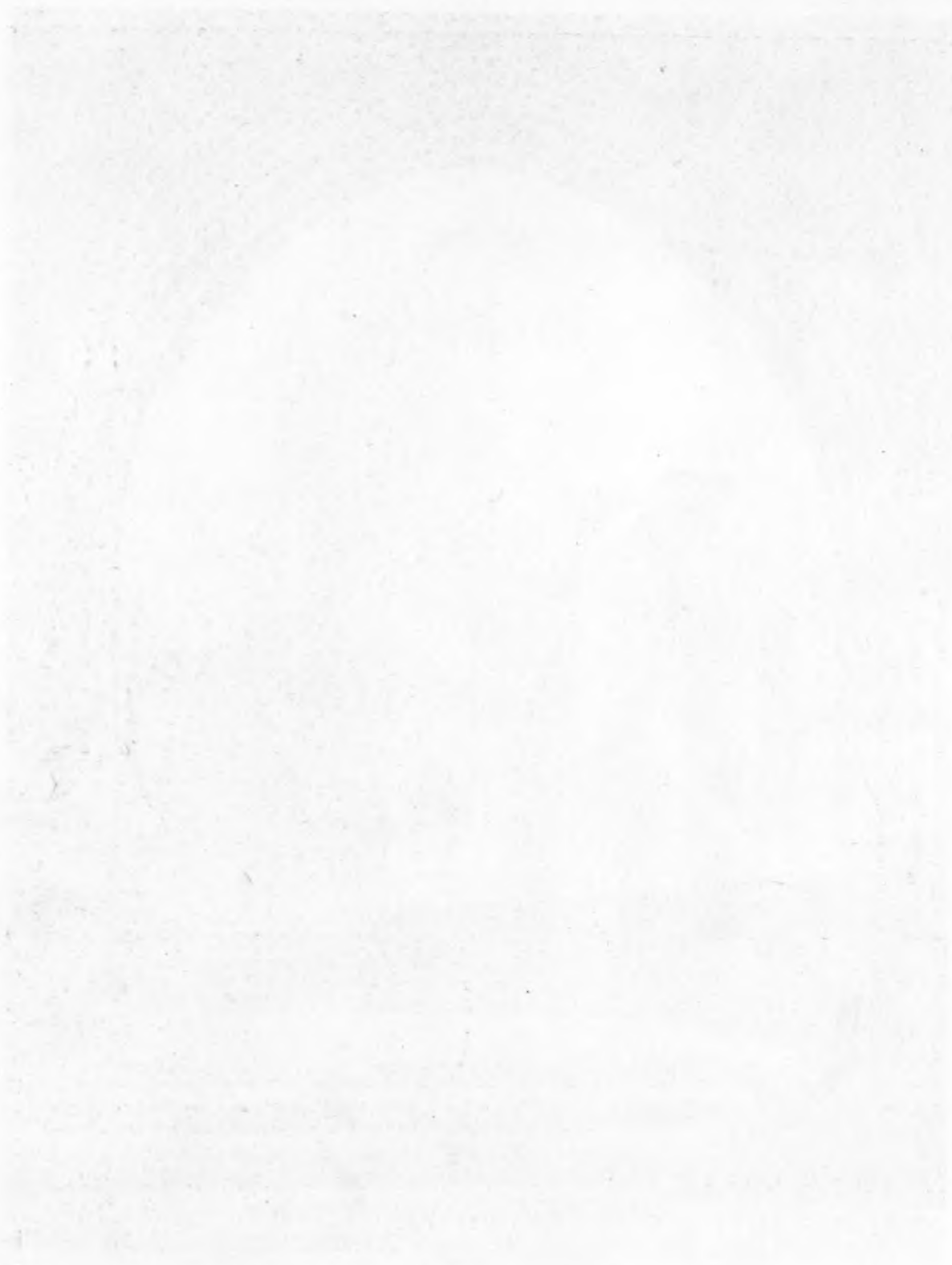


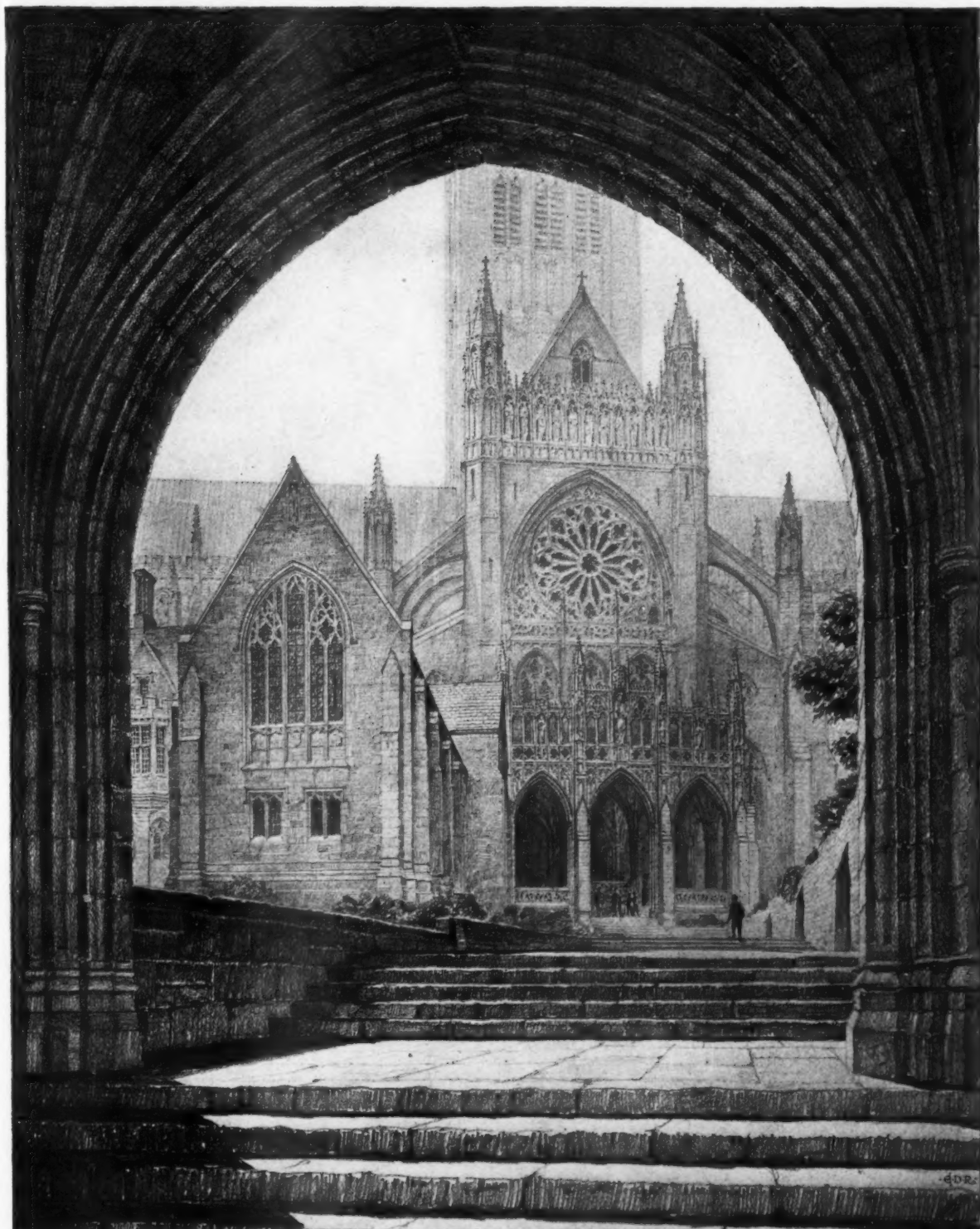


SANCTUARY OF THE BETHLEHEM CHAPEL

HENRY VAUGHAN, ARCHITECT

THE AMERICAN ARCHITECT
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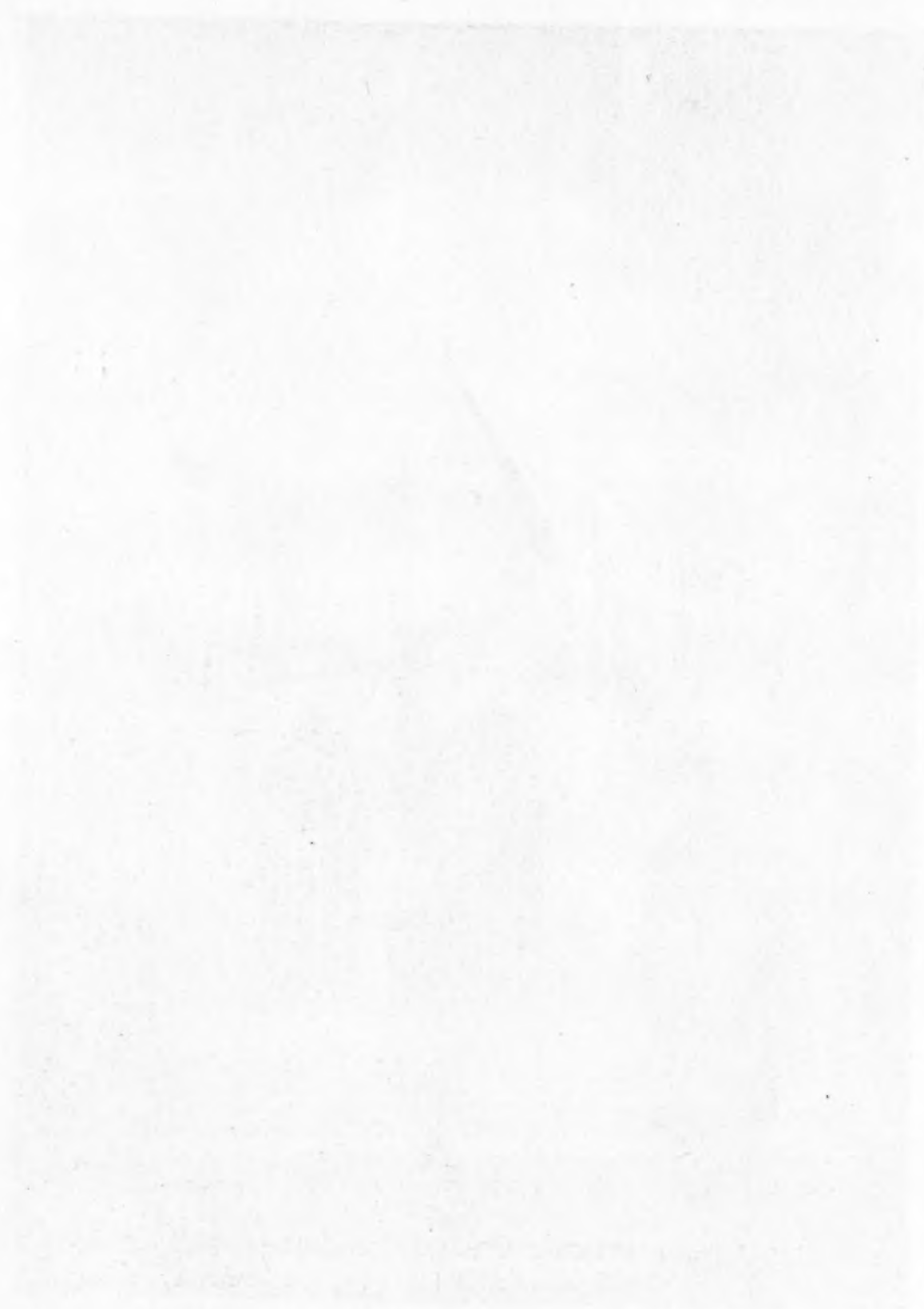


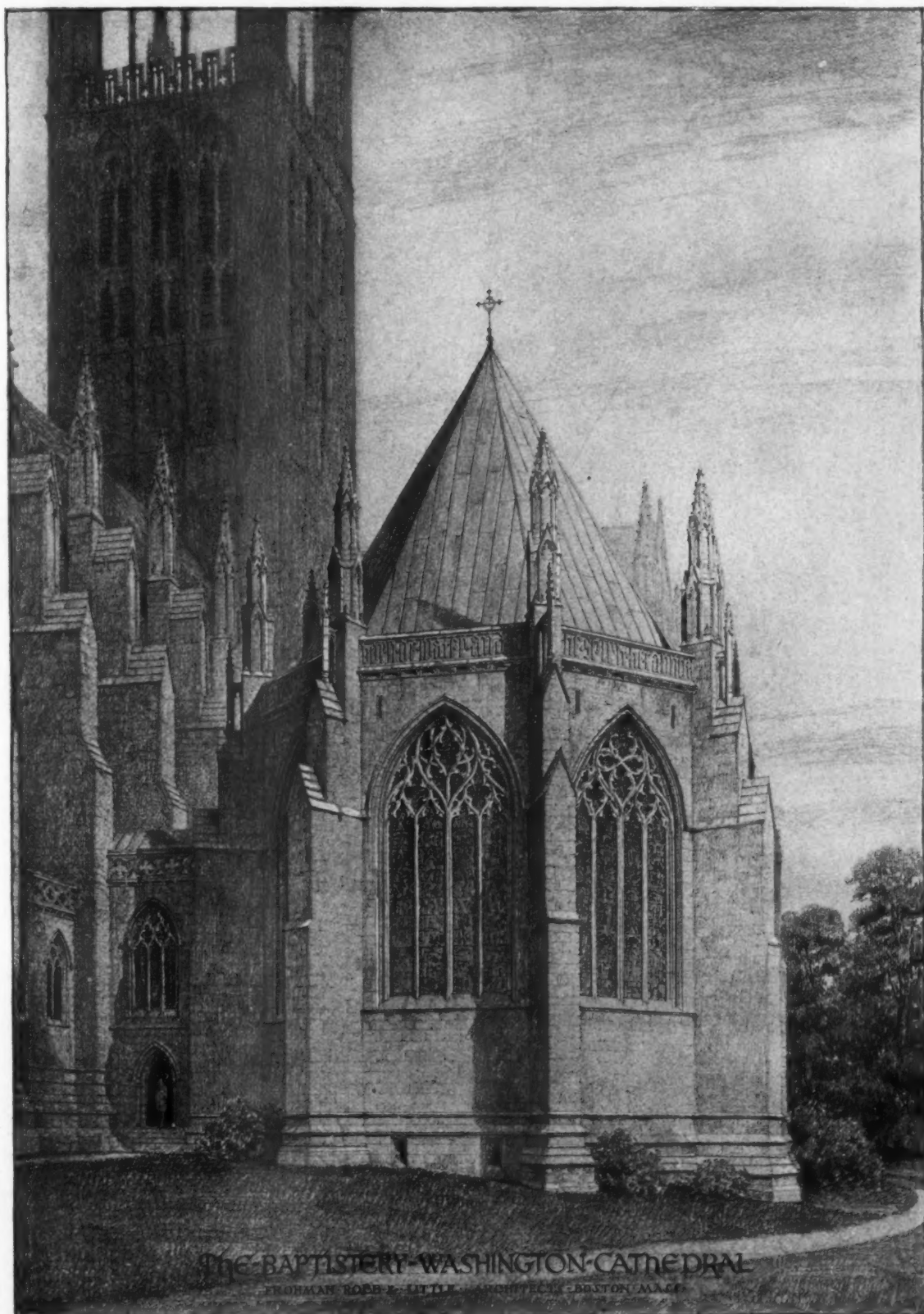
WASHINGTON CATHEDRAL NORTH TRANSEPT FROM 36TH STREET GATE
 DES. FROMMAN, ROBB & LITTLE ARCHITECTS 140 BOYLSTON STREET BOSTON MASSACHUSETTS FEB 26 1925

REVISED DESIGN FOR NORTH TRANSEPT SHOWING PORTION OF PROPOSED ADMINISTRATION BUILDING

This may be compared with original design for North transept as shown in illustration of North side of model

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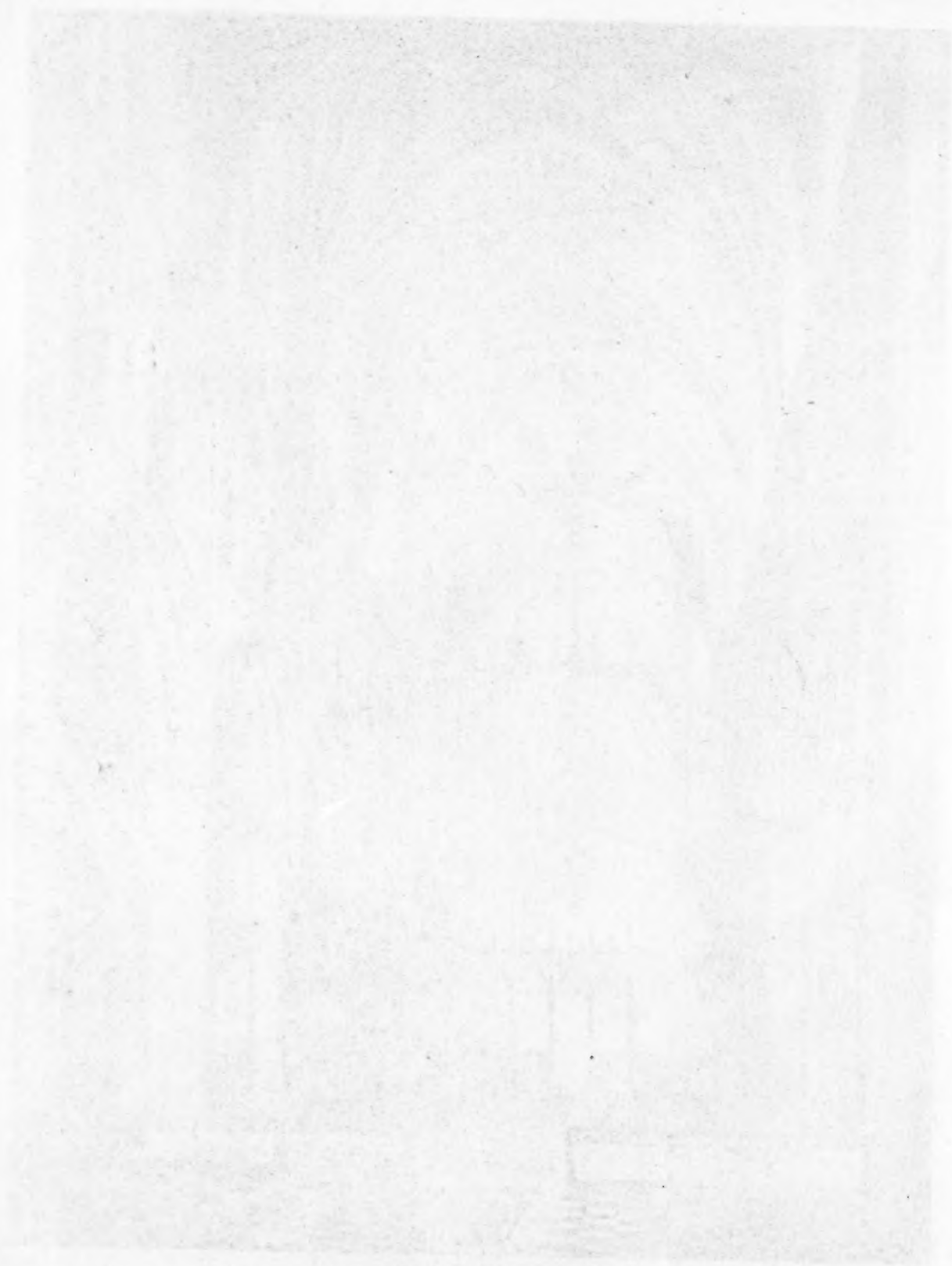




WASHINGTON CATHEDRAL—REVISED DESIGN FOR BAPTISTERY

Original design for baptistery is shown in illustration of the model from Southwest

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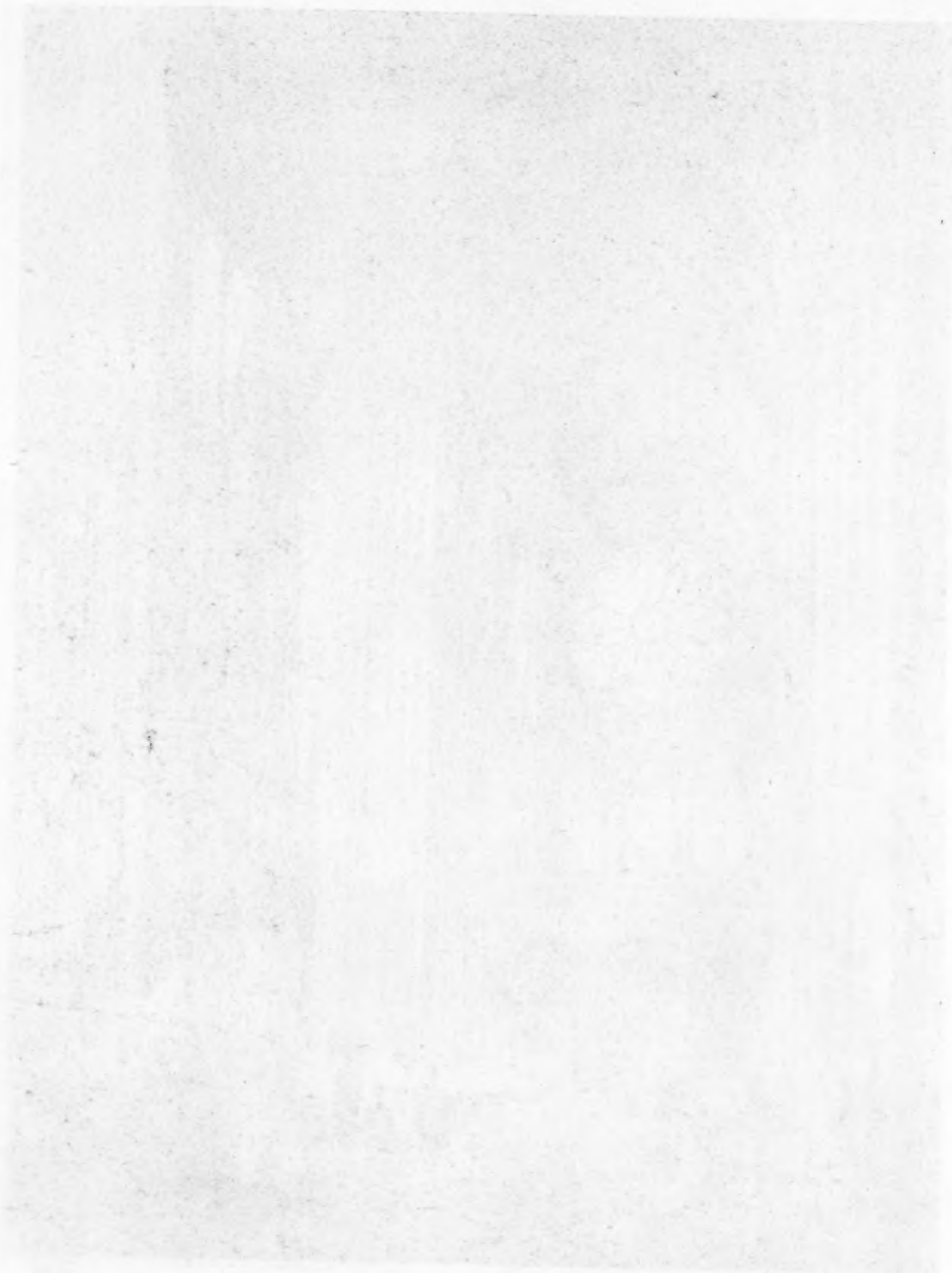
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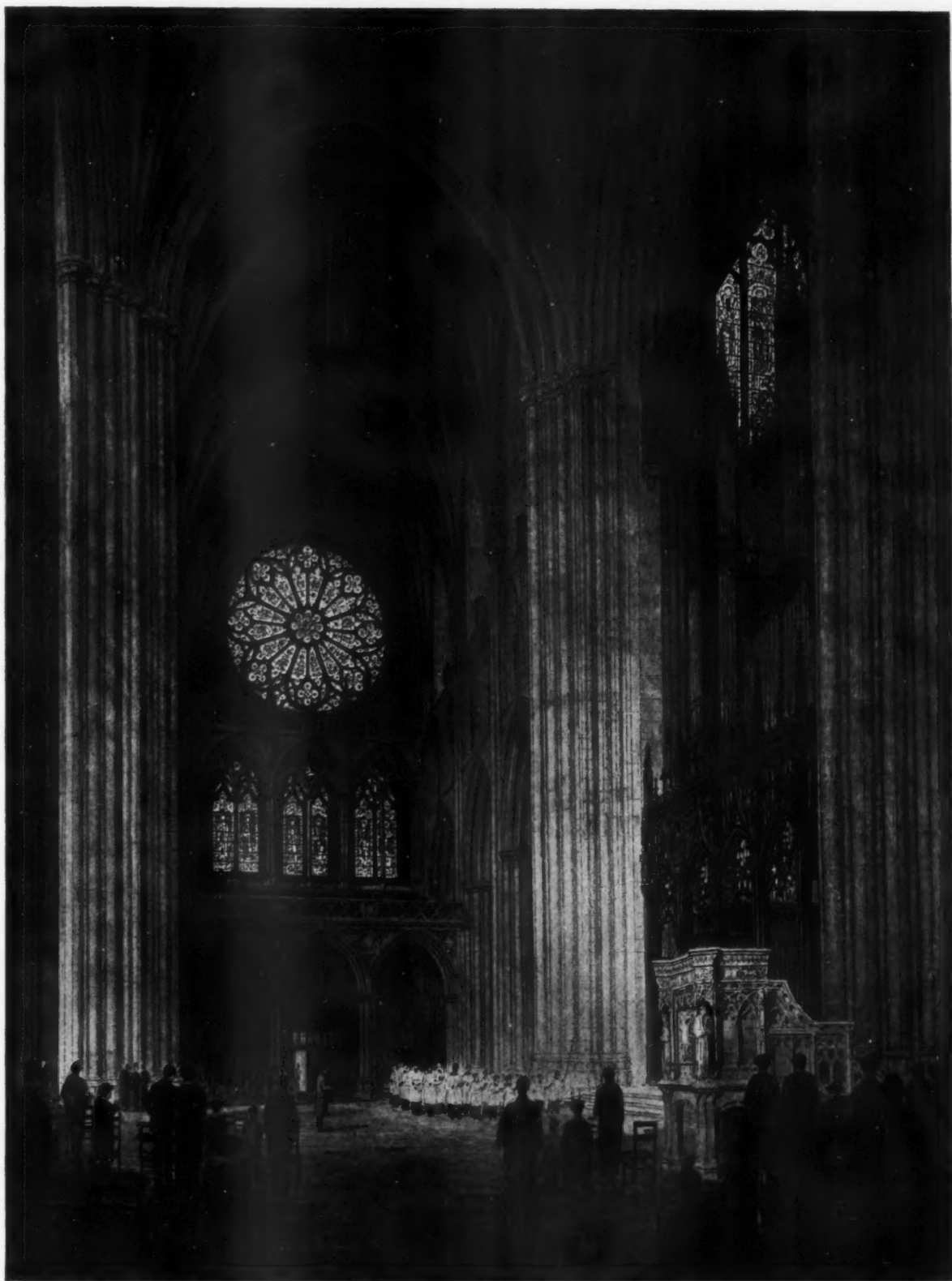
WASHINGTON CATHEDRAL— CHOIR LOOKING WEST

Drawing by Frohman, Robb & Little, architects, showing contemplated revisions in crossing and West end of nave, but following original scheme of choir as planned by Henry Vaughan

THE AMERICAN ARCHITECT
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WASHINGTON CATHEDRAL

REVISED DESIGN FOR CROSSING AND NORTH TRANSEPT, BY FROHMAN, ROBB & LITTLE, ARCHITECTS, 1919

As there is no record of drawings for the interior of transepts having been made before Dr. Bodley and Mr. Vaughan died, the present architects were guided only by the general style and type of the interior as suggested by the illustration of the original design for the nave. Crossing piers shown are of a different type from those indicated on the original floor plan

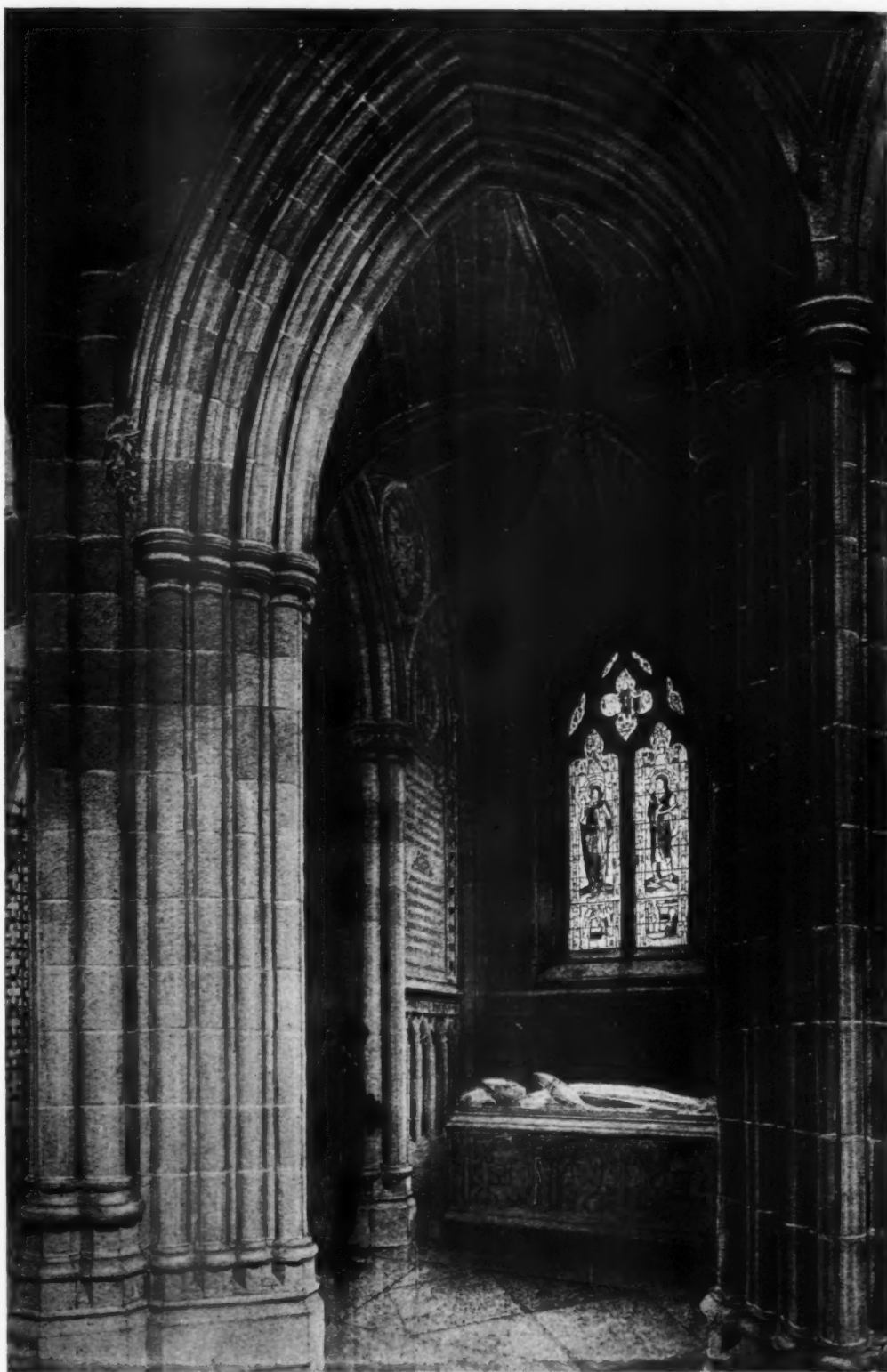
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REVISED DESIGN FOR TYPICAL BAY OF AISLES AND OUTER AISLES

BY FROHMAN, ROBB & LITTLE, ARCHITECTS, 1919

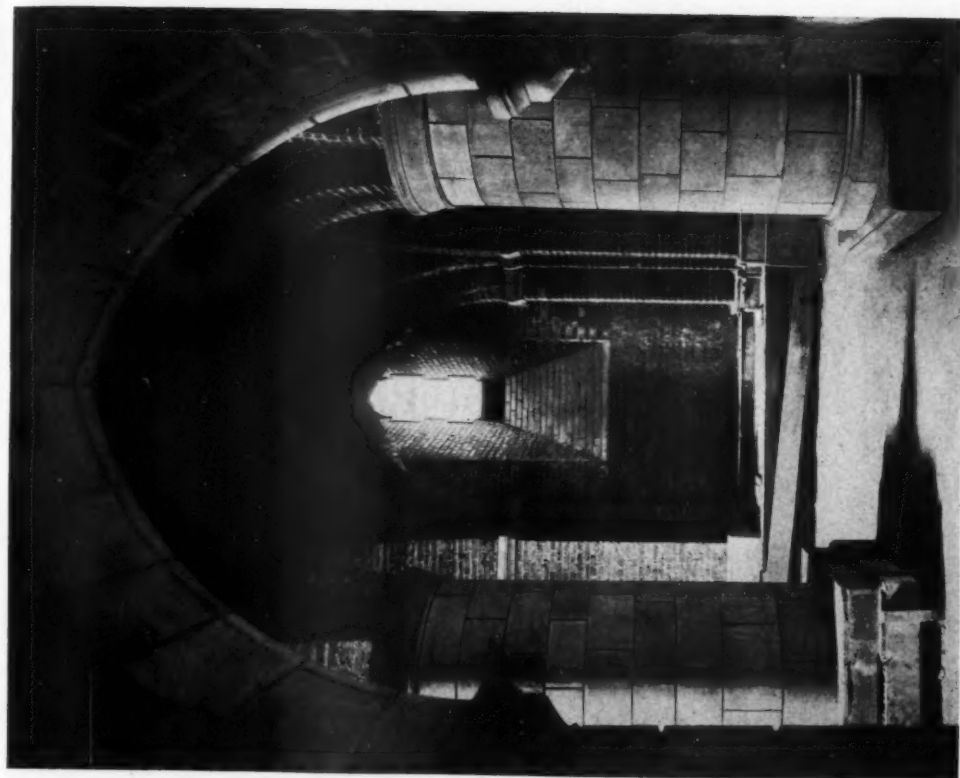
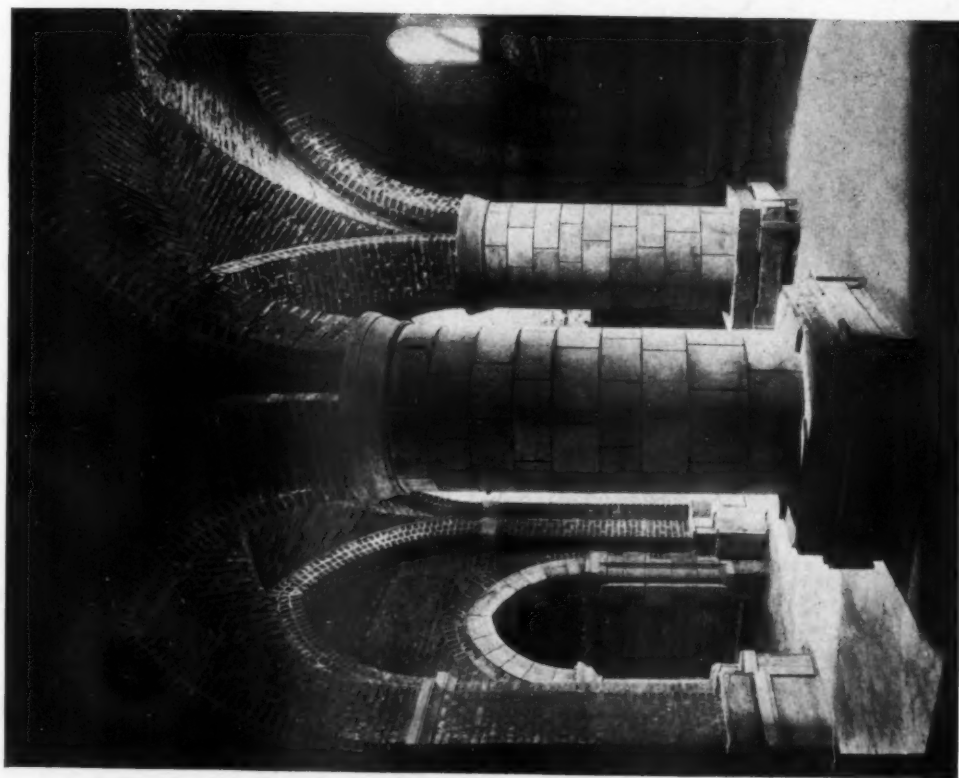
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TYPICAL OUTER AISLE CHAPEL

Revised design by Frohman, Robb & Little, Architects, 1919. This is a distinct departure from the type of chapels indicated in the original design and is now being further revised

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RECENT CONSTRUCTION PHOTOGRAPHS OF CRYPTS

At Left: Ante chapel looking South. Entrance to Chapel of the Resurrection can be seen on left. Brick vaulting and all brickwork shown will be finished with plaster of an interesting texture and a color which will harmonize with the "rustic buff" Indiana limestone of piers, caps and bases. At Right: View taken from entrance to the Chapel of the Resurrection looking toward ante chapel beneath West aisle of South transept

WASHINGTON CATHEDRAL

FROHMAN, ROBB & LITTLE, ARCHITECTS

CRAM & FERGUSON, CONSULTING ARCHITECTS

THE AMERICAN ARCHITECT
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EDITORIAL COMMENT

NEW YORK CITY, following the example set by Chicago, has a club where business men may have a chance to paint, model and draw. A similar organization is, we learn, being completed in Philadelphia.

Absence of occupation is not rest, but rest may be, and really is, secured by some occupation or activity that does not suggest the details of our daily business activities. Painting, drawing and modelling are each occupations that take the mind off of everything else. Their practice affords the finest relaxation for the mentally tired business man.

The Chicago club is now more than five years old. It is a very successful club. During the Summer months members may go with their families to a certain selected neighborhood that affords the "amateur of art" fine opportunities for sketching and at the same time offers good opportunities for the rest of the family for out-of-doors recreation. The idea is a very good one.

It is probably true that most men in their youth, at a time when the necessity for sustained effort is not present, have felt an impulse toward art in one form or another. The insistence of work to provide a living has led them, and often successfully, to occupations widely apart from art. Later the urge persists, and then it is in such organizations as business men's art clubs, that they find a fascinating recreation and association. Naturally, professional art clubs may not regard these business men's clubs with favor. As a matter of fact, the amateur exhibitions of the Chicago organization have been so favorably criticized, and unfortunately, comparisons made with professional exhibits, as to cause some unfavorable reference by professional artists.

There is certainly a place for these business men's organizations, and we feel that they encourage an appreciation of good art in certain directions that the purely professional work fails to reach.

* * *

THE RAZING of the venerable Brevoort house on lower Fifth Avenue, New York, has called forth editorial comment from most of the New York daily papers. That a building so architecturally good and one about which cluster so many of the fine traditions of this city, should be compelled to step aside to provide a site for an-

other of the too many apartment houses that are ruining that fine neighborhood, has inspired a number of well written editorials. None of them has expressed the sentiment of regret or spoken in words architects can better understand than the *Herald-Tribune*. The editorial concludes with this sentence:

"The wreckers who destroy the old Brevoort house will need be young and strong; he is a sound, tough old body even at ninety years, and will die with his bricks on."

"Die with his bricks on,"—a whole column of words could not more thoroughly express the true meaning of the passing of this fine old house.

* * *

WE have so few historic houses remaining that effort should be made to preserve them. And it will undoubtedly be an effort of considerable magnitude to impress on their owners the desirability of keeping such properties out of the hands of that speculative element that seems determined to get from every inch of property the highest rental income.

Even sinister historical association makes a building worthy of preservation. There is, for example, "Treason House" in West Haverstraw, where Arnold arranged with Andre to deliver West Point to the British. And a yet older house, and with less sinister interest is the Billop House on Staten Island. The Billop House dates from before 1700, and it was during the Revolutionary War and in this house that General Lord Howe held his famous parley with Benjamin Franklin, John Adams and Edward Rutledge. The Billop House is surrounded by grounds of ample size for a small city park. The house can, it is stated, be bought for \$60,000, but it is claimed that no funds are available and that if they were, it would be inadvisable to add to New York's park area as the city finds difficulty in keeping up presentably the parks which it now possesses.

An interesting condition when one contrasts it with the ready availability of funds of much larger amount for purposes that are purely political. Something should be done to preserve these old houses, but it's doubtful if sufficient interest can be aroused with our political masters to accomplish anything worth while.

TULSA ARCHITECTS "SPEAK OUT LOUD"

The Editor,

THE AMERICAN ARCHITECT:

WE have long had a desire to speak out loud in behalf of the ordinary average architect who subsists upon the average sized building work, which consists of commercial and residential building which will run in cost from \$5,000 to \$15,000. It is the men who do work in this class that constitute the great numbers who are practicing the architectural profession, safely say 80%.

It has now become the custom of various manufacturers of both good and bad building commodities to advertise in various periodicals over the country that, for the small sum of from ten to fifty cents, they will send to any prospective builder not only a plan but a book full from cover to cover with many and various kinds of plans. Of course, we all know that it is impossible to build from these plans, but the man who may become the architect's client does not know it, for the advertiser never makes such a statement although he is well aware of it, and it is merely a practice of subterfuge, promoting impractical application of his own product and stimulating hard times for Mr. Average Architect, whose good will and patronage he tries to cater to through all the architectural periodicals that the poor fish supports out of his own shallow pocketbook.

Some of these cut rate plan systems are advertising seemingly with the sanction of the A. I. A. and this is stressed upon to the fullest extent and, to the casual observer, puts Mr. Average Architect in the position of one who is out with the one single idea of starving to death, for does not his own greatest organization sanction the idea that plans should be had for small sums or a mere pittance compared with the enormous amount he wishes to charge his client and which seems in direct conflict with the very teachings of the great A. I. A., who should be his great guiding light, but who in fact are putting him in shackles.

There are numerous periodicals running so-called plan service bureaus, printing in each issue a house plan which they will furnish to any reader for a sum way below any known architectural fee. All the reader has to do is to imagine that the building will suit his purpose, which of course it will not do in most cases, and then the local architect is presented with the picture and small scale plan to be made over, if he will do it at the same price, which he cannot do. Therefore, in the eyes of the client, even after copious logical ex-

planations, the architect must be crazy for he has read and knows that entire books of plans can be had for the sum of not over twenty-five cents and the A. I. A. advocates cheap plans, and nearly every magazine his wife buys also says that this is the case, so of course he cannot be wrong.

Some of these advertisers, after mentioning these various cheap prices on plans, suffer some sort of a pang of pain for they will insert in the advertisement, in an obscure sort of place, something about seeing your architect, but the damage has already been done and when he does see him, the architect is merely in for more trouble by having to explain again the great reason *why*.

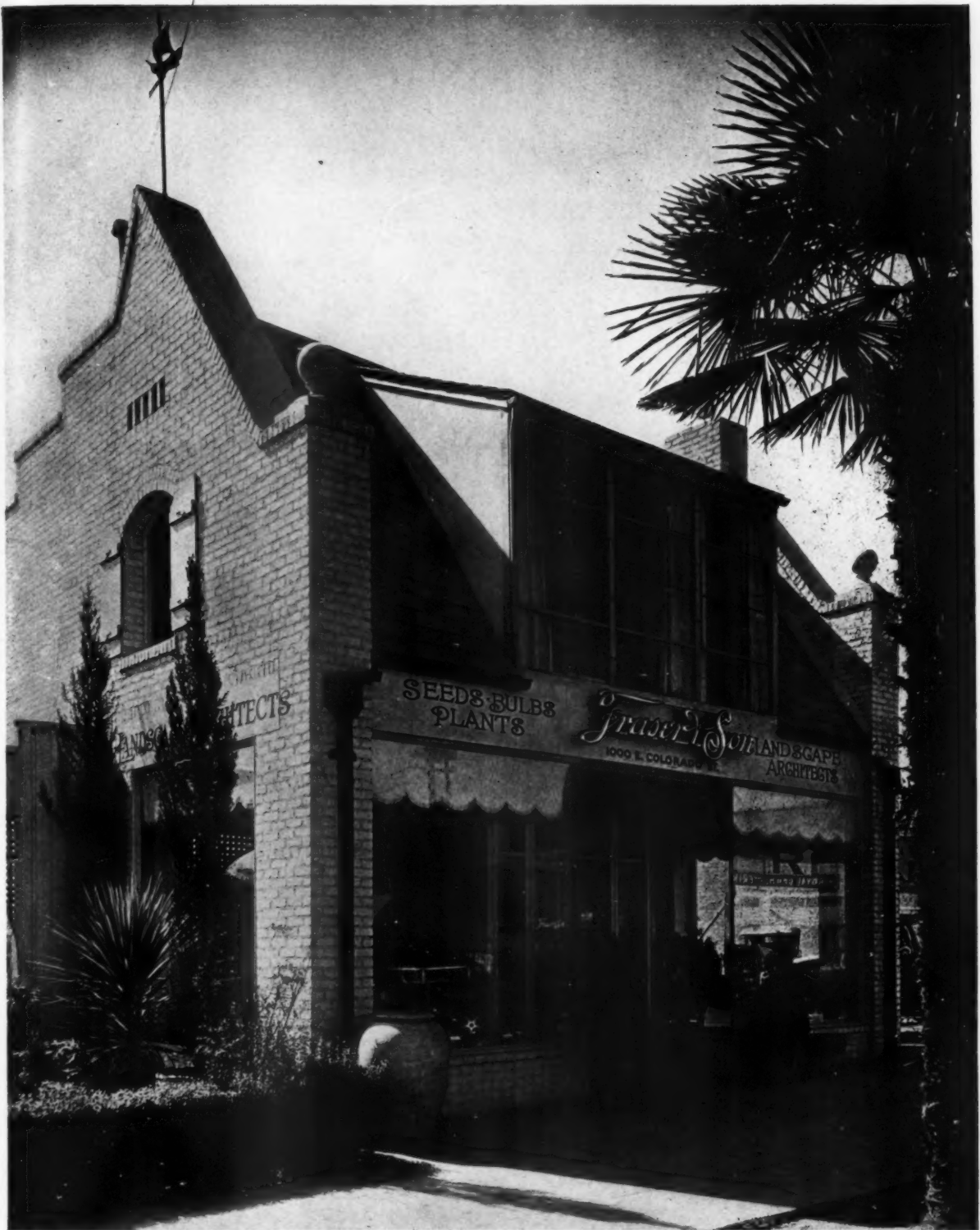
The hard part of it is this, every one publishing this kind of matter knows better than to do it and should come out truthfully and state why the architect should be patronized first-hand and in person and state the benefits of personal service and the benefits of a knowledge of local conditions and the benefits of having the owner's own individuality correctly enshrined in his own home, and many, many other reasons that cannot be stated here.

This great 80% of men in the architectural profession is likewise the 80% of all the subscribers to the various architectural magazines, all of which they like and, as a rule, they subscribe to more of them than they can afford. It would seem that it would be just and proper for these periodicals to reciprocate and to aid Mr. Average Architect, who for years has paid his good *hard earned* money to these various publications, and to take up the cudgels in his defense, for at the present rate 80% of the subscribers will vanish into the great unknown and the only architects left will be the ones who design and plan the great structures, and the twenty-five cent plan will reign supreme.

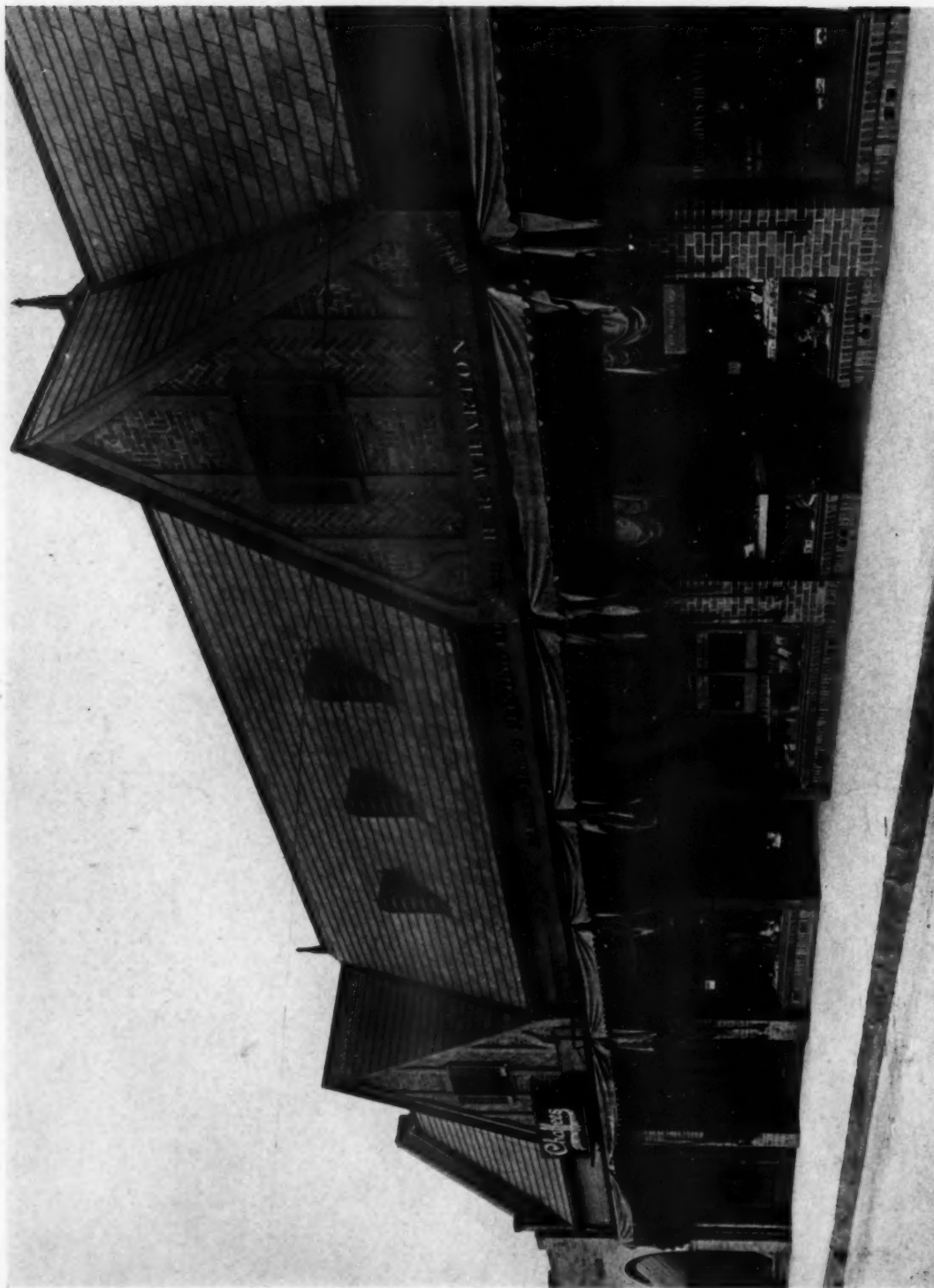
This communication has its origin from the discussion at a recent meeting of the Tulsa Architects Association, following the reading of a letter published in the March 11 issue of *THE AMERICAN ARCHITECT*, page 218, written by H. Lucht and H. G. Anderson, architects, which we consider both appropriate and timely. We would appreciate an expression from you in this regard.

Tulsa Architects Association,
Tulsa, Oklahoma

H. H. Mahler, President,
A. T. Thorne, Secretary,
W. D. Blacker, Chairman
Public Action Committee.



A PASADENA, CALIFORNIA, SHOP FRONT
MARSTON, VAN PELT & MAYBURY, ARCHITECTS



THE MORRIS SHOPS, PASADENA, CALIF.

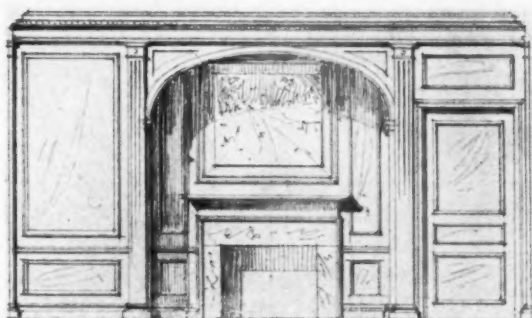
MARSTON, VAN FELT & MAYBURY, ARCHITECTS

Exterior walls, brick. Roof, asbestos slate. Trim, Oregon pine. Heating by gas radiators. Cost per cubic foot 23c.

INTERIOR ARCHITECTURE

Shade and Shadows in Interior Design

COMING directly under the head of one of the three great principles of design—dark and light—it must be conceded that shade and shadow play an important part in the design of any composition. Technically, it is possible to draw a distinction between these two words which we use so often as synonyms. It might be said that a shade represents a surface that is turned away from the light, or is prevented by some other surface from being in the direct rays of the light. A shadow, on the other hand, is that portion of a lighted surface from which the rays of light are cut off by some interposed body. Thus, it appears that certain parts of a recessed surface are in shade, while a projecting body or surface casts a shadow. Generally speaking, however,



AN ARCHITECT'S TYPICAL ELEVATION OF AN INTERIOR WALL

The shadows represent the chimney recess as well as certain projections of the details, but under artificial or even natural lighting it would be well nigh impossible to obtain this effect or anything like it

both shades and shadows, considered only as darkened surfaces as opposed to light, are the means of emphasizing the relation of the various planes in which the component parts of a composition are placed. In architecture, these shades and shadows, formed respectively by recesses and projections, lend interest to a design through the resultant contrast between dark and light, as well as by emphasizing form and stimulating color. Considering a design as merely an arrangement of forms, the aesthetic definition of the words, that shades and shadows are forms without substance is applicable to their architectural use. These shadow-forms are, or can be made, a decidedly interesting part of any design, although seldom is the opportunity which they present to the designer taken advantage of.

The articles in this department have often made a point of the value of breaking up flat surfaces, frequently uninteresting, with ornamental panels in relief. Actually, ornament in relief is only the emphasizing by means of shades and shadows of the various forms which enter into its design. Therefore, it follows that interest can be given to an otherwise uninteresting surface by



AN EXTERIOR FACADE MADE DOUBLY INTERESTING BY THE SHADES AND SHADOWS THROWN AND CAST BY THE DIRECT RAYS OF THE SUN

The architect understood the principle of dark and light and considered it in designing the projections and recesses. A daylight exterior is shown to illustrate the point rather than an interior, for the reason that it is almost an impossibility to photograph an interior without an improvised spotlight or flash, thereby completely changing the effect. The illustration is a photograph of the entrance to the Santuario Agustino en Acolman, Mexico

(From *El Arquitecto*)

creating shades and shadows, or shadow-forms, as a part of its design. Take the introduction of columns or pilasters, frequently employed, as an example. Their part in adding interest to a design is chiefly in the shadows which they cast on the background surface. The long, narrow, shaft of a pilaster or a column has very little interest of its own without the deep shadow it casts on the wall surface from which it projects. The mouldings which frame in trims to door and form entablatures to nothing more without the shades their varying. And yet it is a fact that in studying a design, these shadows are seldom, if ever, are considered. Furthermore, these shadows are even less frequently placed as to make proper shadow-units so as to use of these forms.

The method of the light is not to know as compared with the left

fact that in studying a design, these shadows are seldom, if ever, are considered. Furthermore, these shadows are even less frequently placed as to make proper shadow-units so as to use of these forms.

academic representing—just what one seems or care—ing at 45 over the shoulder,



THE MAIN LIGHTING UNIT OF THIS FIXTURE IS BASED ON THE DUPLEX SYSTEM. WHILE CERTAIN STANDARD FEATURES OF THE BOWL ARE APPARENT, THEY ARE SO WOVEN INTO THE DESIGN OF THE FIXTURE THAT THEY ARE IN NO WAY OBJECTIONABLE

with shadows cast accordingly, has become an acknowledged custom in the architectural profession. In regard to an exterior design, the sun will, in the majority of cases, at some time during the day, take a position so that those shadows will be accurate, or as nearly so as possible. But it is absurd to apply such a custom to an interior design, as is often done, for an effect is created which could never be attained by either natural or artificial lighting. A projecting moulded cornice, for example, is shown as casting a deep shadow on the



THE FUNCTION OF THE LIGHT FROM THIS WALL BRACKET IS ALMOST WHOLLY TO STIMULATE THE ARCHITECTURE. THE DIRECT RAYS ARE SO DIFFUSED BY MICA SHIELDS THAT THEY DO NOT SMOTHER THE SHADOWS MADE FROM ANY OTHER SOURCE

frieze below, a condition that could exist only in a room in which the light came from a dome shaped ceiling above. Nature takes care of the lights and darks in lighting a room by daylight in such a way that architecture is often entirely lost sight of or forgotten in the interest which is aroused by the dancing lights and shadows of the sun. But when the same room is lighted by artificial illumination, a real problem is created, a problem which must be carefully considered to take advantage properly of the projections and recesses in the design so that the shadow forms will add the interest to the scheme they are capable of doing. So, then,

THE AMERICAN ARCHITECT

the design of a room had best be studied as it will appear under artificial illumination, and the lighting system, which is responsible for that illumination, must be planned at the same time.

The problem is a big one: how to design architectural details to give the best results in dark and light, and how to arrange the lighting units best to emphasize those results. The answer to the first item is that each recess and projection is either partly or wholly in shade, or casts a shadow on some other surface, and that such shades and

count as form in design, there must be one main source of light for all four walls, or, if the room be large enough, one light for each wall, placed in the same relative position to each wall, and each of the same intensity as the other. All other lighting units in the room must be subordinate to this main source, both in location and in intensity, so that the shades and shadows cast by these secondary lights will not blot out the shadows cast by the main light. What happens otherwise is the cause of much bad lighting in interiors: the total



AN INTERIOR WALL MADE ESPECIALLY INTERESTING BY ITS LIGHTS AND SHADES

shadows must be considered as components of the composition. After the most desirable shape of these shadow-forms has been determined, arrange the lighting units so that in the finished room the shades and shadows will take just that form. The general procedure in the execution of rooms today is not only contrary to this method, but the lighting system is worked out by one who seldom knows anything of architectural details or methods of making their form prominent.

In the first place, to make shades and shadows

absence of shades and shadows. The average room is lighted with one idea in mind: to flood an equal distribution of light over the entire room, using ceiling lights, wall brackets and table and floor lamps promiscuously to bring about this result. Those shades and shadows that might be formed by the play of one or another of the lighting units on the architectural design are entirely blotted out by the light from another unit, and the result is an absence of any shadow-forms whatever, and a consequent lack of interest in the archi-

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tectural scheme. It is not intended to be implied that in every room there must be a center ceiling fixture to cast similar shadows on all four walls, as might be insinuated. In fact, there are cases where no center or ceiling light of any kind is used where the shadow-forms are clearly cut and serve correctly to stimulate the architectural design.

It is not the purpose of this article to go into a discussion of the advantages and disadvantages of the various methods of lighting, as direct, indirect and concealed systems. Each one has its own field

at the same time, they are so placed that the light from one blots out none of the shadows that another one casts. This latter function is brought about by the light of the brackets and torcheres being so shielded that its intensity is lessened immediately it passes through the shield. And this brings up another point that is very often neglected or improperly considered. That is the shielding of the lights of the subordinate fixtures. In probably fifty per cent of rooms, the light from one fixture blots out the shades and shadows from another, because the lights of the subordinate



SHOWING THE LIGHTING FACILITIES IN THE MAIN DINING ROOM OF LOUIS SHERRY'S IN NEW YORK CITY

A concealed system, with lights installed above the cornice, gives an equal distribution of light over the entire room, which is subordinated by wall brackets and torcheres with lamps of sufficient intensity to mark distinctly the shadows of the architectural design, and yet properly shielded so that the lights of one never blot out the shadow cast by another

if used properly and in the right place. In the illustration above, showing the lighting arrangement in use in the dining room of Louis Sherry's, New York City, a concealed lighting system is installed, the lights being placed above the cornice moulding, which reflect from the ceiling a light of equal intensity practically over the entire room. This system is subordinated by a series of wall brackets and torcheres, located at places in the room where their glow will cast shadows that will make the architectural design more prominent, while,

fixture are improperly shielded. In other words, the light passing through the shield is not diffused sufficiently to reduce its intensity. Subordinate lighting units are generally installed for the purpose of making a light of sufficient intensity at some one point in the room, often of small radius, for reading, or some other such purpose. Table and floor lamps are especially used for these purposes, and wall brackets are sometimes installed for a similar reason. It is not necessary that the light given out from such units form a part of

THE AMERICAN ARCHITECT

the general lighting system of the room, and the lights, consequently, may be so shielded that, aside from throwing an intensified light over the chair or table, as the case might be, its existence is practically unknown except for the interest

serves this purpose. It is made of a shell, or rather of shells, the diffusing qualities of which are very great, especially when it is tinted, as the shade shown in the illustration. Besides this, the reflecting quality of the product is such that



AN EXACT REPRODUCTION OF AN UNTOUCHED COLOR PHOTOGRAPH OF A SET IN WHICH THE WALLS AND WINDOWS ARE HUNG WITH THE SAME MATERIAL,—A PALE GREEN GAUZE

The various colors are produced entirely through the use of the colored caps, described in the text, on lamps which are placed as footlights. To the right are two green caps; in the center, two blue caps, and at the left, one red cap. At the top to one side, two lamps are covered with amber caps. This illustration of the effects possible by use of color lighting was made in a photographic studio with such background and accessories as were available

which the color of its shield or shade, or the design which may be depicted thereon, adds to the decorative scheme of the room. The shade of a table lamp, shown as an illustration to this article,

a light of sufficient intensity is shed for reading or other similar purposes.

The indirect ceiling light, so commonly used, also has its advantages. Its light, reflected from

the ceiling, is generally of sufficient intensity to make the shadows of the architectural motives distinct, and the soft glow, which finds its way through the semi-opaque inverted dish or bowl, gives light, though not of sufficient intensity for reading purposes, to that section of the room which is not reached by the rays of the reflected light. There is, however, not only a lack of interest in the design of this type of fixture, but, we think,

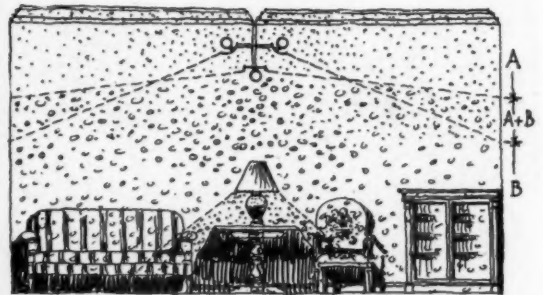


THE SHELL PRODUCT FROM WHICH THIS SHADE WAS MADE HAS A GOOD LIGHT DIFFUSING QUALITY. ITS UNDER SIDE ALSO REFLECTS WELL, SO THAT AS A SHIELD FOR SUBORDINATE LIGHTING UNITS, OR A UNIT OF INTENSIFIED LIGHT, IT IS VERY PRACTICAL. IT CAN BE READILY TINTED ANY COLOR DESIRED

its design is even objectionable. The truth of the matter is that the dish or bowl is not really a part of the lighting fixture, but rather placed there to conceal the actual fixture. To be sure, its reflective qualities further the purpose of the unit as an indirect light, and its translucent qualities prevent the light being direct. But it becomes objectionable through not functioning entirely as a lighting fixture. There are cases where the direct light has been combined with the indirect so that to all intents and purposes, the fixture is designed for a direct light, although, entirely unconcealed, there has been introduced a unit which reflects its rays by the indirect process.

It might not be out of place to consider the practicability of colored lighting in house interiors. Colored effects in lighting are usually considered

as having no application to residences, but they have possibilities that are adaptable to plain, neutral tinted walls, especially in apartments, where the tenant is not allowed, even if he can afford it, to change the treatment of the walls. The illustration in color, reproduced here, represents a somewhat theatrical set. It is not intended to portray how colored light is used in house decorating. But it does hold an idea. A description of the colored lights used in that scheme is given in the caption under the illustration. Consider how colored lights might be used in certain ceiling fixtures as illustrated, in which the direct and indirect methods are combined. The lamps used as indirect lights ("A") could be amber, casting a yellow glow over the entire ceiling and part way down the walls. The lamps of the direct



ILLUSTRATING THE APPLICATION OF COLORED LIGHTING TO A ROOM, "A" AND "B" REPRESENTING DIFFERENT COLORED CAPS, THE LAMPS "A" GIVING AN INDIRECT LIGHT AND "B" A DIRECT LIGHT

portion of the fixture ("B") could be of some other darker and more pronounced color, as a red. Where the red tint melts into the yellow ("A" + "B"), an orange tint would show, and gradually this would grow darker and redder until directly beneath the fixture it would be a decided red. The darker color should be used in the direct lamps and the lighter for the indirect.

The color in the set reproduced is not obtained in the usual way of tinting bulbs, by dipping them in paint, but by a new process of colored glass caps which are attached to the lamps. The caps are made of natural colored glass, which make for clarity of color, and the shape of the caps eliminates the line where two colors meet, by blending the two tints in such a way that interest is thus added. The film of colored light which covers the entire floor, the furniture and draperies, would harmonize all the colors appearing in the various fabrics in the scheme in a way that could be obtained by no other method.

Acknowledgment is made to the following firms for their courtesy in supplying illustrative material: Holophane Co., Laco-Philips Co., Linerusta-Walton Co., E. H. Wardwell.

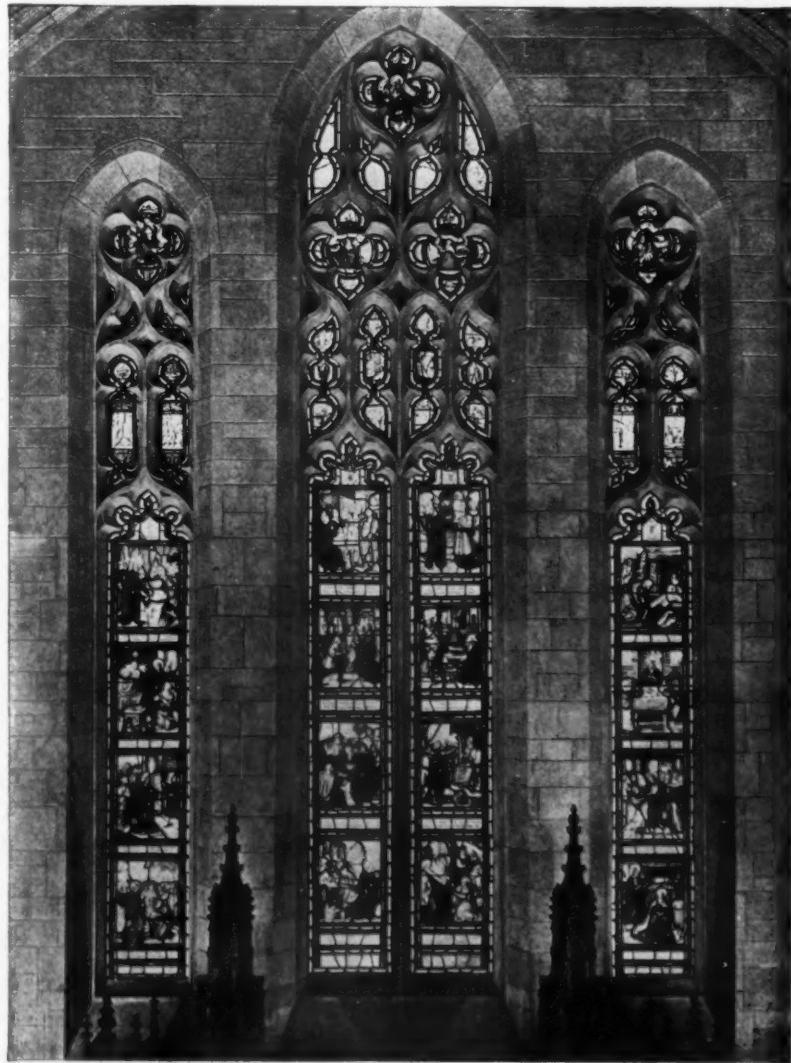
SIXTEENTH CENTURY FLEMISH STAINED GLASS WINDOWS

A VERY well known English architect and author, Lawrence Weaver, says in the introduction to his book on "The Repair and Enlargement of Small Country Houses" that he would "rather see an old fireplace in a new building, or a new fireplace in an old one, than an old fireplace taken from one old fabric to another." A little further on, he says: "In cases where the remains of demolished fabrics are used to enlarge or adorn other old buildings, it is desirable that some obvious record be made, by inscription or otherwise, to reveal to those who will come after us what precisely is the history of what they see." Without such record, Mr. Weaver claims, the history of architecture is poisoned.

Such a charge cannot be made against the use of some old stained glass panels, supposed to be the work of some Flemish artists of the sixteenth century, recently installed in the chancel windows of the Park Avenue Baptist Church, New York City. It is presumed that these panels came from a church in that part of Flanders lying between Bruges and Antwerp, which was threatened or actually dismantled during the French Revolution, for they have been stored in an estate in England for over a hundred years. The fact that the painting is more finished and of softer treatment than that of the previous century; the perspective more accurate—with less Gothic feeling in the architecture and more Renaissance detail in the ornament, yet with no trace of the enamel colors which came into use toward the end of the previous century, makes it almost certain that the panels date from the first half of the sixteenth century.

Much of the fine stained glass in Flanders was

utterly lost, and consequently these panels are all the more valuable and interesting. The windows are in a fine state of preservation, excepting one or two medallions. The collection consists of sixteen panels and four medallions, and the tracery of the three windows in which they have been used has been especially designed for them. There are no painters' signatures or marks of any kind visible to indicate the names of the artists with any certainty, but, as glass painters of this period very rarely appended a signature to their work, this is not surprising. In those days, records of their having painted certain windows were confined to written documents preserved in the ar-



THE CHANCEL WINDOWS

THE AMERICAN ARCHITECT

chives belonging to the various abbeys, churches and cathedrals concerned. The panels illustrate scenes from the life of Our Lord, are exactly the same size, and the figures of one scale, although, of a certainty, painted by various hands.

The fact that in the entire collection no subject

has been duplicated is conclusive that the panels comprise a series. It is interesting to note that in the majority of panels architectural motives have been freely woven into the design. This is further evidence of the general interest in architecture and that its channels extend far beyond the limits of building design.



SHOWING THE DESIGN IN DETAIL OF FOUR OF THE PANELS

REVIEW of RECENT ARCHITECTURAL MAGAZINES

BY EGERTON SWARTWOUT, F.A.I.A.

WE have just been reading an article by A. Trystan Edwards, M. A., A. R. I. B. A., in the March 18 issue of *The Architects' Journal*, in fact we have been reading a number of other articles in other English magazines, and some few in our own, and now at the end of this really fine Spring afternoon when all nature smiles, as we are told she does, and the birds

somewhere are chirping and the brooks burbling, or whatever it is they are supposed to do at this season of the year, we, ourselves, are not either burbling or chirping. We are not happy enough. The plaintive sounds we utter are more like croaks than chirps. We are, to speak plainly, tired. It may be the vernal lassitude that sulphur and molasses were supposed to relieve, or again it may be downright laziness, but we think not; we prefer to think not. We would rather attribute it to the difficulty we experience in reading serious articles. It is very difficult for us to read serious articles, but we do it. It is hard, but we do it, as a sort of penance,

perhaps, at the end of Lent. And yet the articles themselves are generally good, when they are read. The ideas are new, quite often, and sometimes they are a distinct contribution to the scantily written records of architecture, and one is apt to say in a review that this or that is a good article and everybody should read it. But everybody generally doesn't. Why is it so? We might state parenthetically that this method of asking a question and then answering it oneself is quite generally done in serious work. It's a good way to start. Mr. Edwards does it. "It may be asked" he says, "wherein does architectural style consist?"

and then he goes on to answer wherein. But to revert to our own question, Why don't people read serious articles? Perhaps serious is not the word. Technical would hardly do either, architectural articles would be worse. There probably is a good word, just the right word, but we are too lazy to look it up. Let us say we refer to articles such as that of Mr. Edwards, above referred to,

From "The Architectural Review," London



WATERLOO BRIDGE

(From a photograph by Basil Ionides)

ture of architecture, if we can use that term, is lamentably meager. We have many pictures and little of the text, and that little is passed over rather contemptuously by most of us, just as in reading an historical romance we skip the description because it is printed in solid text and read the dialogue because it is printed in short sentences. We do not mean that Mr. Chambers should rewrite his essay in dialogue form or in the modern patter of the comic supplement, but we do wish he had employed a simpler style: then we might have discovered just why the Royal Institute gave him a medal. But it must not be

on architectural style and that of F. P. Chambers, B. A., (Cantab.) on *The Aesthetic of the Ancients* in the February number of *The Journal of the Royal Institute of British Architects*. Now both these are good, and Mr. Chambers' essay was awarded a medal by the Royal Institute, but we must confess we read them both with extreme difficulty. The ideas were there, but we found it quite a difficult matter, in our enfeebled state, to dig out these ideas. There were some sentences, usually long and involved ones, that resisted our best efforts, and we were obliged to reread them several times before we got the idea. Now this is, in our opinion, a mistake. The literature

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supposed that Mr. Edwards and Mr. Chambers supply the only instances: unfortunately there are many such, and the reader with the best intentions in the world starts an article, reads a half page, and then gives it up, and thereby misses some very valuable information. Take the writings of the late Professor Goodyear, for example. He was very much in earnest, knew his subject thoroughly and had many interesting theories,

From "The Architectural Review," London



WATERLOO BRIDGE FROM THE SURREY SIDE

and yet it was so hard to find out what he was driving at that few people appreciated his contributions.

We remember well our first reading of Ferguson many years ago in an architect's office near New Haven. It was in the Summer vacation, the Long as our English friends have it, and we entered the office to study architecture. We had a vague idea that we would be put to work making blueprints: we had no idea at all how they made the things, but we were sure we could do it; we had a vague idea, too, that on these mysterious blueprints the architect gave minute and explicit directions just where each nail should be placed and just how long each 2 x 4 was to be. We thought we might even be allowed to color prints and draw perspectives and give vicarious directions to mechanics. Great indeed was our disappointment when we were given a chair in a sort of cubbyhole off the private office, and a copy of Ferguson was placed in our hands and we were told to read it. It seemed to us we could have read it at home just as well or even better, but we meekly obeyed orders. As we remember, we never got beyond early Christian basilicas; in fact, as we look back at it we wonder how we ever got that far, but anyway that was our limit. There was one page on that subject we read over a hundred times at the very least. It was hot; a persistent blue bottle buzzed in angry opposition to the incessant whine of the trolleys and to the sub-

dued roar of the street below; our mind reverted to the tag end of a takeoff of a serious article in the Yale Lit. describing the Palisades: "and, at their feet, Hoboken slumbered on, in dreamy, dusty, beery sleep." We slept: the beer was lacking but the rest of it was appropriate. And then we would wake with a start, glance guiltily about and begin again on the dreary round. It's only recently we have had the courage to open Ferguson, and we loathe early Christian basilicas with a deep and abiding hatred. We pass them up completely when we are abroad, being much in the state of mind of the elderly tourist seated dejectedly on the steps of a museum in Florence:

From "The Architectural Review," London



EQUESTRIAN FIGURE IN WOOD
BY CHANA ORLOFF

"Mary," he said to his wife, "if you show me another Holy Family I'll scream."

And yet even early Christian basilicas can be made interesting and much more commonplace things too. One of the most interesting things we ever read was the report of a plumber on the drilling of an artesian well. We assume he was a plumber; at all events he was drilling this well for the Sailors Snug Harbor over in Staten Island sixty or seventy years ago, when Staten Island

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was a place apart, with, as we suspect, wild Indians roving about, and only weekly communication possible with lower New York. That report was sent to us with a lot of other reports some years ago when we were called on to make still another report on the conditions there. The report, the plumber's, not ours, was a masterpiece. He was an earnest soul, this plumber, and very methodical, and every evening, not being able to go to the moving pictures, he wrote a sort of diary of the day's events. Evidently his apparatus, or drill, or whatever they use, was defective, and at critical moments would break and leave drill and core some dozens of feet below in the rock and then they would have to fish for it and finally raise it nearly to the top and then it would break away again. And each effort and failure and success was put down each night in the simplest language and in the clearest and most vivid way: their disappointment, their hopes for success next morning and their joy when they finally struck water. Compared to that report, written by a nearly illiterate plumber, all the other reports were as nothing.

But we find that, as usual, we are getting quite aside from our review. At the same time we cannot resist adding a word or two on the subject of clarity of style. We quite forgot the modernists. Compared to their effusions the essay of Mr. Chambers is a model of lucidity. For example, there was an article a month ago or so in *The Architectural Review*, London, on the Aesthetics of Architecture by Mr. Vernon Blake which is highly praised in the March number by Mr. Howard Robertson. Personally we could make very little out of the Blake article and evidently Reginald Blomfield felt the same way, for he says:

Mr. Blake's articles are entitled "Aesthetics of Architecture," but I find myself unable to disentangle what his theory really is. Architecture, he says, is influenced by its environment, (1) by the mental position of the artist, (2) by the "necessity of maintaining a harmony between the building and its surroundings." He attributes certain qualities of English Gothic to "the smaller and more picturesque forms of the ambient English countryside;" and he proceeds to reinforce his argument by an enthusiastic reference to Chinese architecture. The pagoda at Yuan Ming Yuan "seems to repeat in spirit the tree forms of the surrounding conifers," but if the conifers were planted after the pagoda was built, or if the conifers tumble down, what becomes of the argument? The bridge of Loko Ch'iao is an elegant structure, and its pointed arch makes a pretty frame for the landscape beyond it, but no horse or cart could ever go over it, and the poor gentleman who has reached the top appears to be already overcome by his exertions. Mr. Blake seems to think this might be useful as a suggestion to our designers; but, after all, a bridge has to be used. All architecture depends on temperament of the designer; of these conditions Mr. Blake seems to ignore all but the last.

He suggests that there may be a hope for architecture in the principle of "relativity." I have to admit that I do not in the least understand that principle, but I note that it is not yet universally accepted. In another sense, of course, all architectural design is relative, in the sense

that the value of solid is in relation to void, of height in relation to breadth, of ornament in relation to the plain surface, in other words, that in good architecture any given part has only value in relation to the effect of the whole; but this has always been recognized as of the very essence of architecture. As to those details which Mr. Blake would delete, the capitals of columns, cornices, and so on, Mr. Blake seems to forget that they may have a structural purpose; the capital of a column gives a wider bearing, and that is why sensible architects prefer the Doric to the foolishness of the Corinthian capital, and a cornice protects the wall below in a very valuable way. There is no necessity to use these familiar features if they are not required for the purposes of building, but when they are, why should one deprive oneself of features which answer their purpose and also please the eye? In the ambitious attempts now being made in large commercial buildings to arrive at something quite new by dispensing with what is old, the result is sheer ugliness, and of course, just as great a sham as all the fripperies of modern Neo-Classic which Mr. Blake quite rightly condemns, in regard to the fact that neither the one nor the other have the slightest relation to the actual structure of the building.

Mr. Howard Robertson himself contributes a gem in the same March number, entitled *Shrewd Sculpture*, featuring the work of Chana Orloff, some of whose productions we reproduce. Mr. Robertson is quite enthusiastic about it, for he says:

Chana Orloff owes little to any particular teacher.... May it be suggested, without fatuity, that it is time that sculpture such as Orloff's commenced gradually to replace

From "The Architectural Review," London



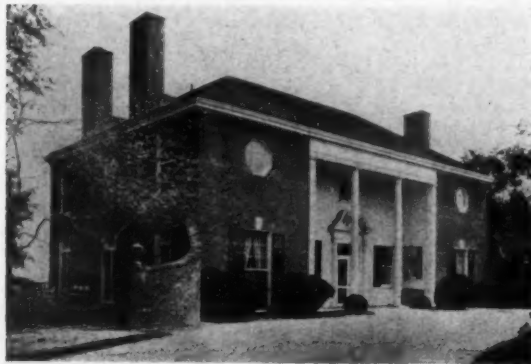
PORTRAIT IN CEMENT OF M. REY
BY CHANA ORLOFF

THE AMERICAN ARCHITECT

our Cupids and Psyches. That the day of these smooth, white horrors is nearly past is proved in many an auction room, where a callous second-hand market appraises their value at shillings per hundredweight; first and foremost, however, we might try to overcome in England that great stumbling block for which architects are not without responsibility, the reluctance of our modern world to encourage a modern art.

While we are not very keen on Cupids, we are inclined, ourselves, to prefer a neat little Psyche or even a Rogers group to Miss Orloff's gentleman with the many goitres, but there is one sentence in Mr. Robertson's article with which we are in hearty accord: "Chana Orloff owes little to any particular teacher." How true!

From "The Architectural Forum"



MAIN BUILDING, CREEK CLUB, LOCUST VALLEY, N. Y.
WALKER & GILLETTE, ARCHITECTS

Of our own magazines *The Architectural Record* for March has a very interesting article by Claude Bragdon on Producing Shakespeare as Illustrated by Walter Hampden's production of *Othello*. The arrangements are very ingenious, the design excellent and the Bragdon drawings charming. *The Architectural Forum* for March

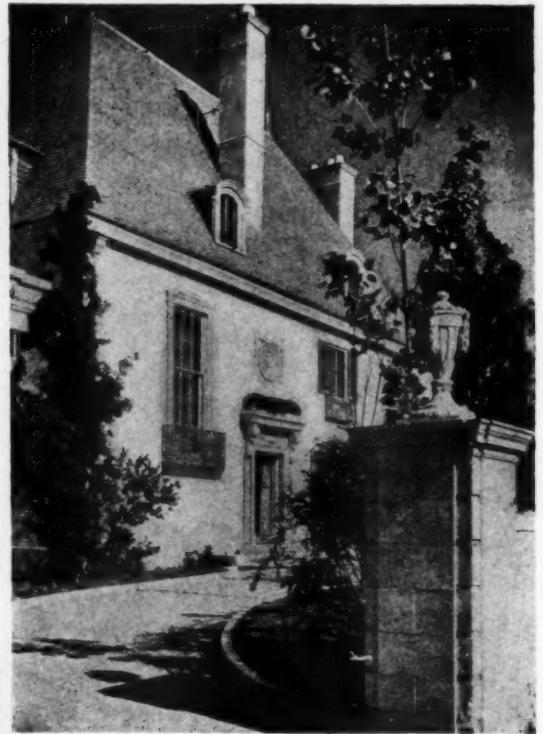
From "The Architect"



HOUSE OF ANDREW GRIFFITH, GERMANTOWN, PA.
CARL A. ZIEGLER, ARCHITECT

has a lot of valuable information about country clubs and some excellent illustrations; a good club in Tenafly, N. J. by Aymar Embury, II, some of the excellent work of Roger H. Bullard, and Walker and Gillette's Creek Club, Locust Valley, the façade of the main building being one of the best and most original things done in the way of country work in recent years. *The Architect* for April has some delightful country houses by R. Brognard Okie and by Carl A. Ziegler and an excellent formal house in Los Angeles by Morgan, Walls & Clements, and Mr. Murchison says some very clever things. *Architecture* for April has a corking photograph of a house by Bradley Delehanty which we reproduce and a charming drawing of a Town House and Library Building

From "The Architect"



DETAIL, HOUSE OF WILLIAM S. HOOK, LOS ANGELES, CALIF.
MORGAN, WALLS & CLEMENTS, ARCHITECTS

at Dover, Mass., by Kilham, Hopkins & Greeley, and there is a letter by Peter de Gelleke on Allied Architects Associations which brings up several interesting points.

Mr. de Gelleke in this letter refers to the Association in Los Angeles and to other similar associations which have been formed in other parts of the country and says that these latter associations are founded without sufficient cause or rea-

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son and that such an association is "taking an unfair advantage of the architects and firms of architects who in the past years have executed work which not only is a credit to this country but is also recognized by all foreign countries as worthy of study and consideration." Now we are not particularly familiar with the conditions leading up to the Los Angeles Association, but as we recall it these conditions were rather unusual and unfortunate, conditions chiefly political, which seemed to preclude the selection of capable architects for public work, and we understand that as a result of this association public sentiment compelled the award of the Commission to the asso-

From "Moderne Bauformen"



HAUS A. VORSTER IN KOLN-MARIENBURG, NORDSEITE
PAUL BONATZ, ARCHITECT

ciation and a very excellent building was the result. Just where the other associations are being formed or why they are being formed, we don't know, but we don't think Mr. de Gelleke has cause for his fear that such associations will become general or that they will ever take an unfair advantage of the private practitioner. And we think so, first because such associations cannot be formed successfully unless there is a very good reason for their formation, and such a good reason fortunately is not apt to occur in many localities, and, second, because of the general impracticability of operation of such an association. The first reason is so apparent that it needs no explanation, and the second seems equally so. Two heads are better than one—sometimes, but not in architectural design. It is hard for us to imagine an association successfully designing and erecting a monumental building, and we cannot imagine any association actually guaranteeing as Mr. de Gelleke says they guarantee, that, if awarded a commission, "the building would be better adapted to the country's needs, better designed and more economical."

Such a bold assertion is astounding. But, as we have said, there is but a very slight chance of such associations becoming general. We can conceive the formation of an association under certain extraordinary conditions and we can conceive good resulting therefrom, but that the idea is a good one, practically, artistically, or financially, we cannot admit.

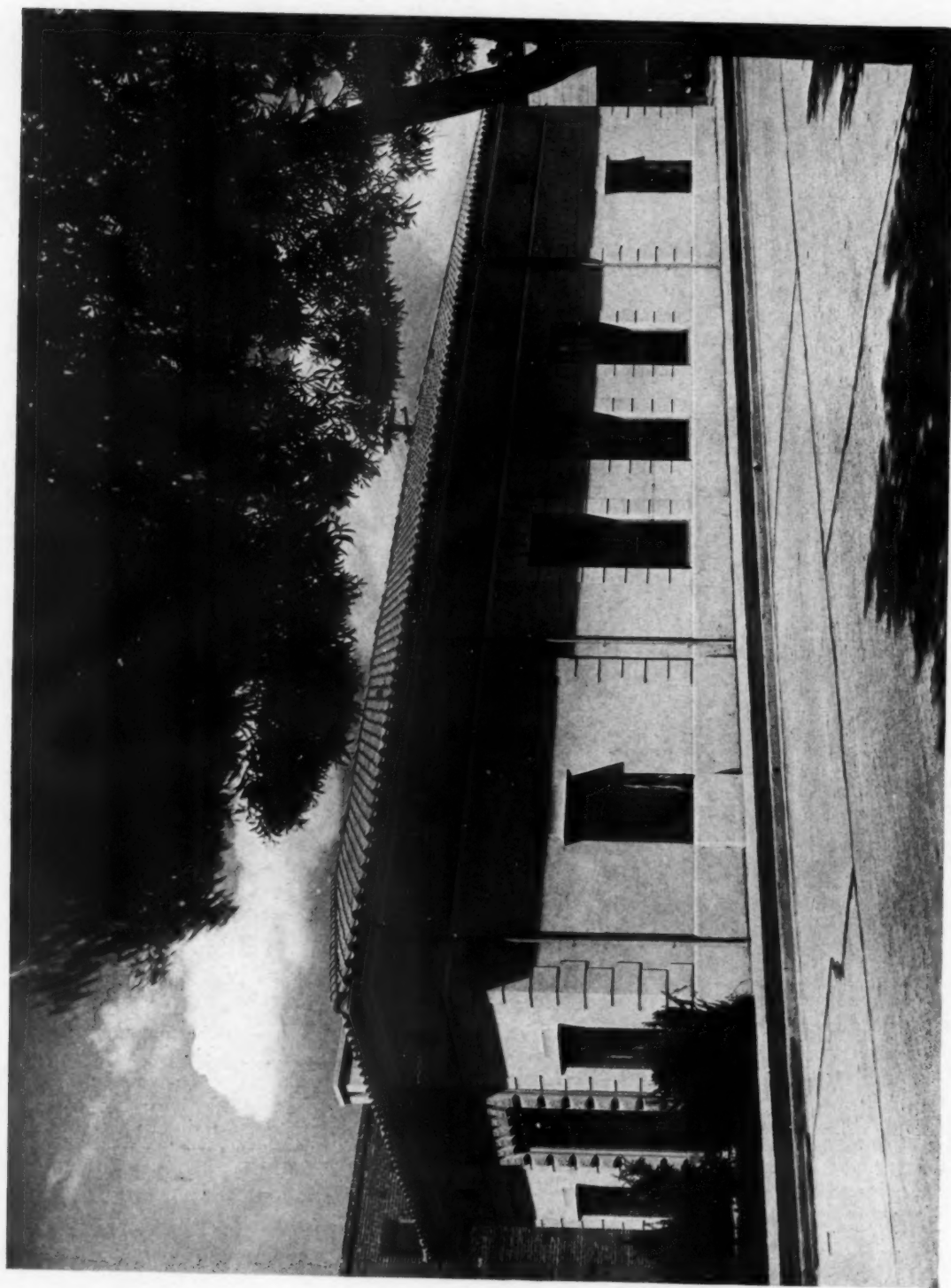
From "Architecture"



REAR OF HOUSE, ESTATE OF MRS. W. A. SLATER, NORTH CASTLE, N. Y.

BRADLEY DELEHANTY, ARCHITECT

Also in *Architecture* there are published two schemes submitted in the competition for the Harvard Business School, by Walker and Gillette and by Coolidge, Shepley, Bulfinch & Abbott. There have been other schemes published but we have sedulously foreborn to mention them in any way for the very good and sufficient reason that our own office was one of the competitors and our comment would therefore be out of place, but we cannot refrain from congratulating Mr. Coolidge and his associates on the beauty of their design and expressing our regret that Harvard is to lose the chance of having such a distinguished group of buildings. The general scheme is excellent and compact. We had the feeling ourselves that the clubs should overlook the river but perhaps it is better that the dormitories should face that way: in other respects the scheme is ideal and corresponds exactly with the requirements written and orally implied. The Library is very simple and extremely appropriate, with excellent fenestration, and the Dining Hall and Clubs are by far the best things in any scheme that we have seen. If built it would be easily the best of any similar buildings in Harvard, or in any other American university for that matter. A great chance has been lost. Let us hope that someone else will give another group to Harvard and that Mr. Coolidge will build his Hall.



ORANGE COUNTY FRUIT EXCHANGE, ORANGE, CALIF.
MARSTON, VAN PELT & MAYBURY, ARCHITECTS

ORANGE COUNTY FRUIT EXCHANGE, ORANGE, CALIF.
MARSTON, VAN PELT & MAYBURY, ARCHITECTS



ENTRANCE DETAIL, ORANGE COUNTY FRUIT EXCHANGE, ORANGE, CALIF.
MARSTON, VAN PELT & MAYBURY, ARCHITECTS



Photo by Dan Harris

TWO FAMILY HOUSE AT HAZLEHURST PARK, NEW ROCHELLE, N. Y.

HENRI VALLET, ARCHITECT

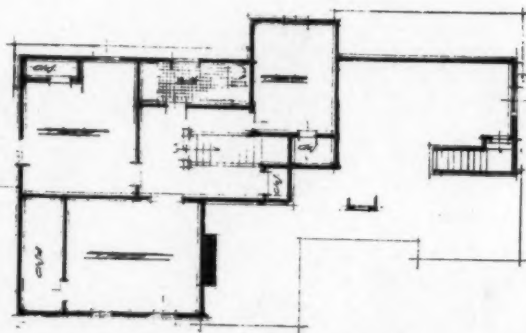
Exterior walls, stucco on metal lath, stone trimmed.

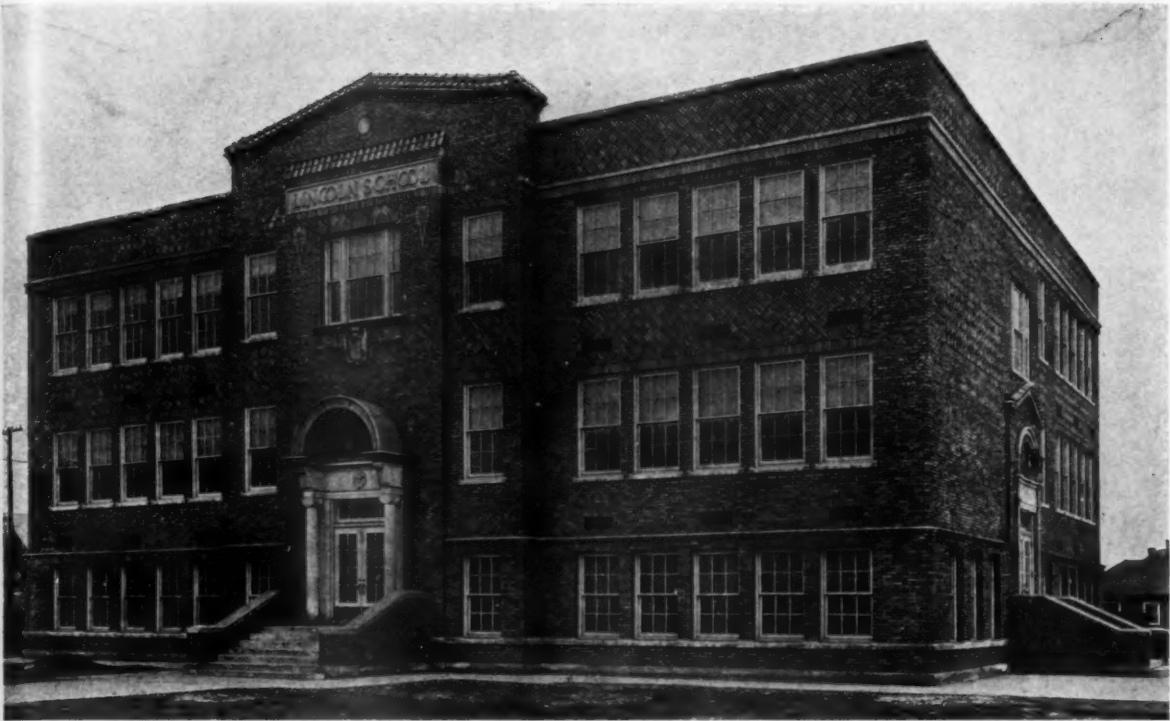
Interior partitions, plaster on steel.

Floors, oak. Roof, asbestos colored shingles.

Trim, Whitewood. Hot water heating system.

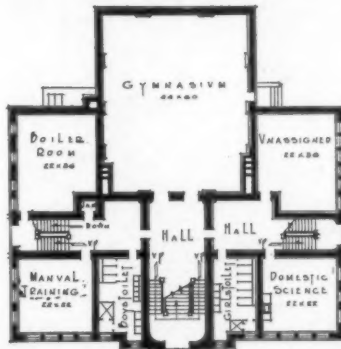
Price per cubic foot 45c.



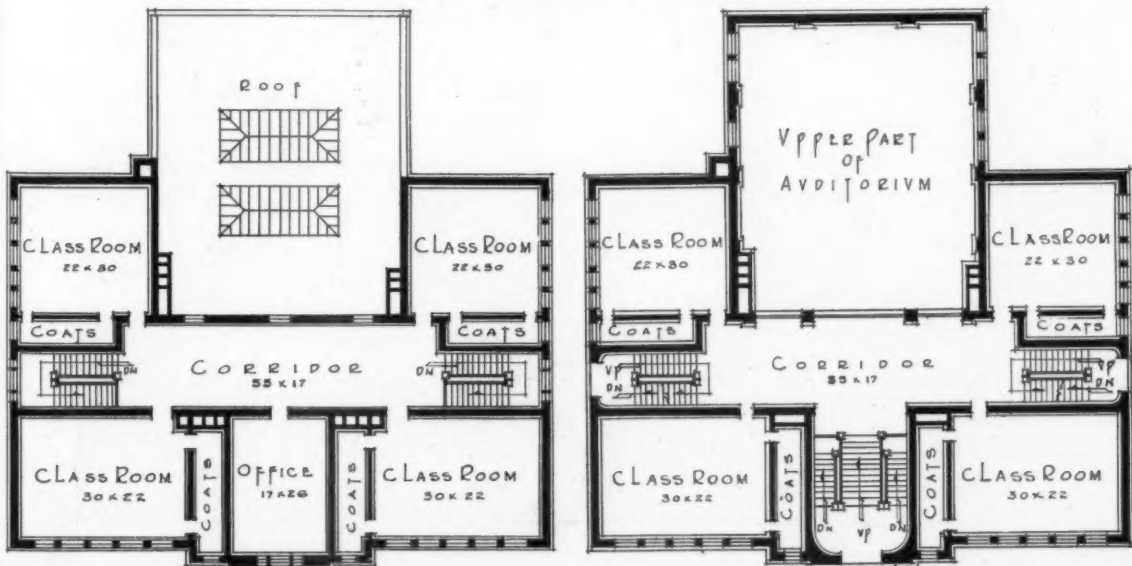


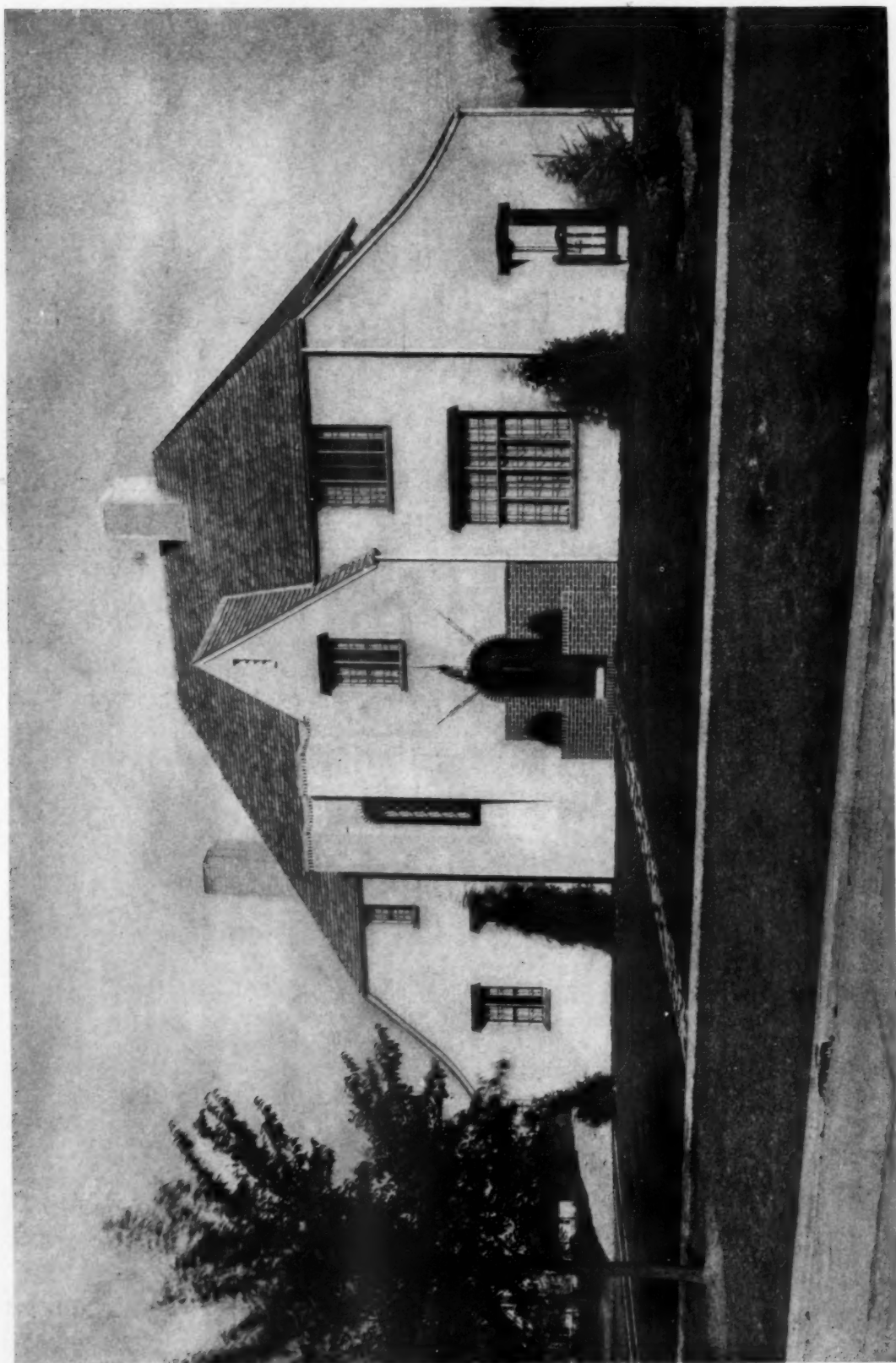
LINCOLN SCHOOL FOR
COLORED CHILDREN,
TERRE HAUTE, IND.

JOHNSON, MILLER, MILLER
& YEAGER, ARCHITECTS



EXTERIOR walls, vitri-
fied brick, backed by
hollow tile. Roof, tar and
gravel. Trim, pine. Steam
heated. Floors, tile, cement
and wood. Cost per cubic
foot 28.9c.

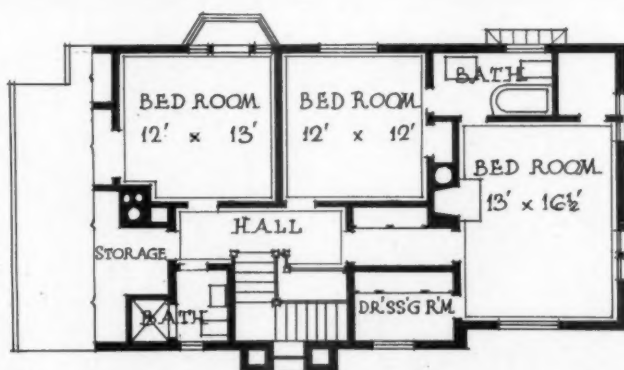




HOUSE OF W. B. BRYANT, BIRMINGHAM, MICH.

DISE & DITCHY, ARCHITECTS

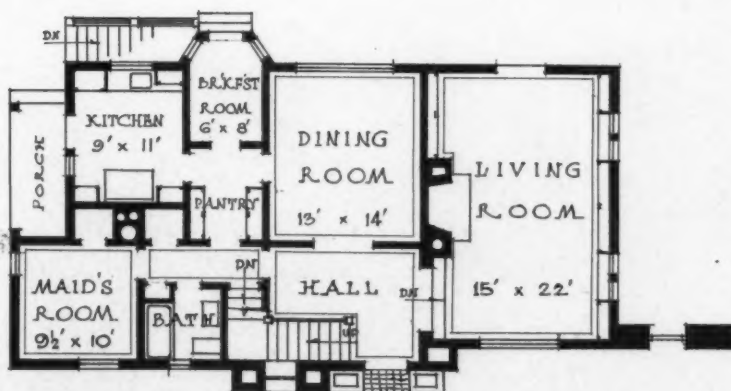
THE AMERICAN ARCHITECT



WALLS, cinder block, painted with cement paint on outside and plastered directly on block inside. Roof, cedar shingles. Steel cottage casements. Floors, white oak. Trim, wormy chestnut stained and wax finished. Heating, hot air with forced ventilation. House is equipped with mechanical refrigeration; has an electric water heater. Cost per cubic foot 45c.

HOUSE OF W. B. BRYANT,
BIRMINGHAM, MICH.

DISE & DITCHY, ARCHITECTS

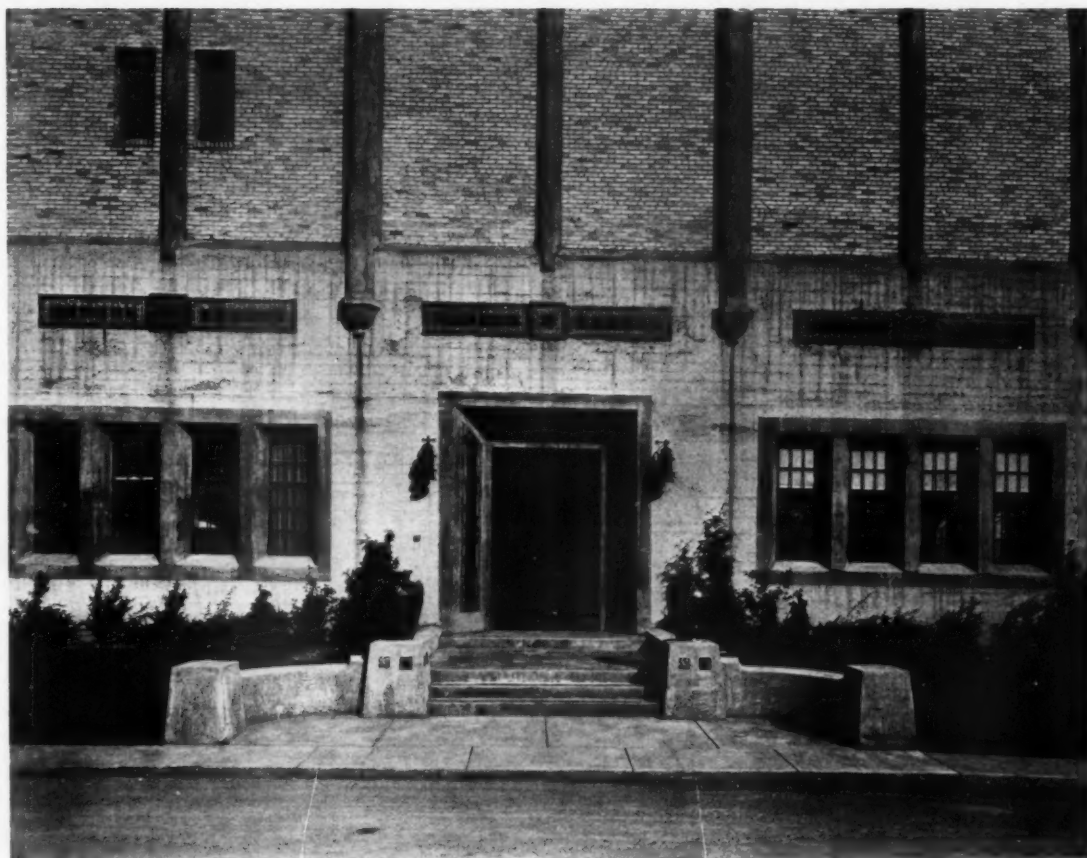




HOUSE OF W. B. BRYANT, BIRMINGHAM, MICH.

DISE & DITCHY, ARCHITECTS

ENGINEERING *and* CONSTRUCTION



DETAIL OF ENTRANCE AND LOWER PORTION

The LINCOLN STORAGE COMPANY WAREHOUSE, CLEVELAND, OHIO

THE WATSON COMPANY, Architects and Engineers

TO design and construct a storage warehouse which satisfies the architectural demands of a finely developed neighborhood, is a noteworthy achievement. It indicates the owner's appreciation of his responsibility to his neighbors and to the public and also evidences the architect's ability to render a true architectural service.

It is most interesting to study the development of the architecture of industrial and storage buildings. Perhaps the latter presents the more difficult problem to the architect owing to the preponderance of blank walls as compared with other

kinds of structures. It is apparent that the old-time blank wall of uniform texture, reduced to an unbroken plane, was as impossible as a wall over-ornamented with details, useless orders and cornices. It is one of the finest successes of architecture to produce a blank wall that completely satisfies by its harmonious colors, texture and proportions.

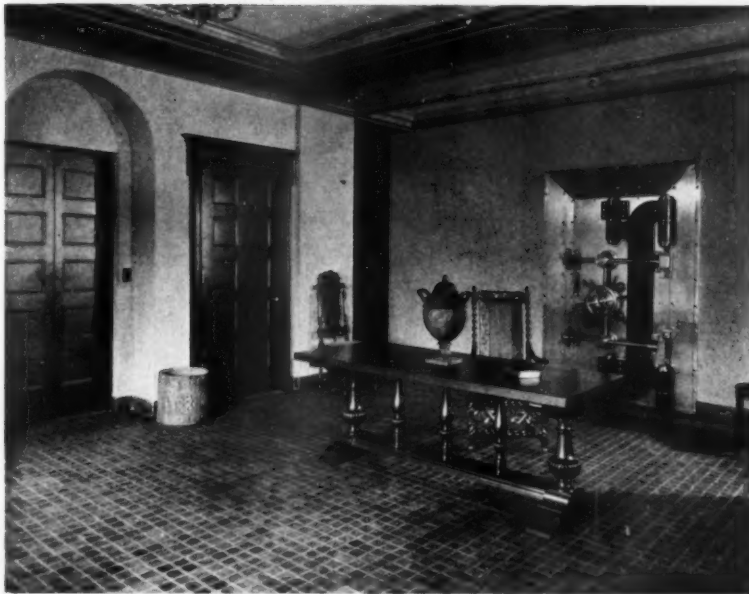
All of these requirements have been met in the Lincoln Storage Company Warehouse, Cleveland, Ohio. This building is located on a plot of ground containing about two acres. It is bounded on the



THE LINCOLN STORAGE COMPANY WAREHOUSE, CLEVELAND, OHIO

THE WATSON COMPANY, ARCHITECTS AND ENGINEERS

THE AMERICAN ARCHITECT



LOBBY AND VAULT DOOR

north by the campus of the Case School of Applied Science, on the west by the Rockefeller Parkway, on the east by the Nickel Plate Railroad and the belt line of the New York Central Railroad, and on the south by Cedar Glen Boulevard which is the main approach to the Shaker Heights section of the city. Along the west side and through the southern portion of the tract is Doan Brook, which is appropriately bridged near the entrance from the Boulevard.

An intensive development of the site is necessary owing to its prominent location and high valuation. The proposed improvements to be made on the property consist of a large apartment house located along the western boundary of the tract; a large garage for the use of the occupants of the apartments, and the Lincoln Storage Company Warehouse located along the eastern boundary. One-half of this warehouse has been constructed. It is intended to serve as a shield between the railroad and the future apartment house.

The original topography of the ground was very rough and it was necessary to grade the entire tract. Doan Brook was utilized as a feature by walling its banks, building a small dam and pool, and a bridge for the approach to the grounds.

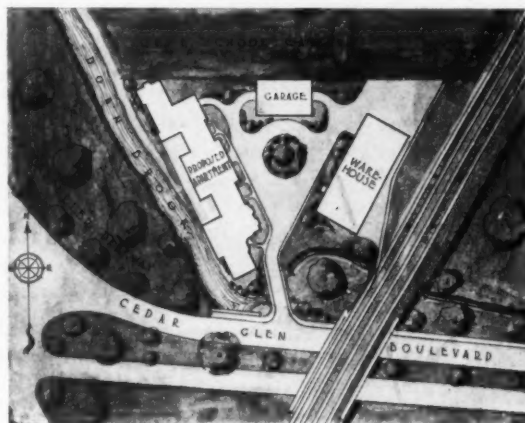
The constructed one-half of the building is 123'-0" long and 64'-0" wide. On the north end is located the boiler room equipped with oil burning furnaces, and truck sheds which are 29'-0" in length. At this place is also located the exterior ten ton capacity freight elevator which is ample for a loaded truck. There is no basement and the elevation of the car floors on the railroad switch is the same as that of the second floor. The build-

ing is seven stories high; has a floor area of 57,469 square feet and a contents of 625,540 cubic feet.

The balance of the first floor contains a spacious lobby which opens to the general office, the vault, the automatic elevator, the stairs and the women's rest room and toilet, and the corridor to the warehouse portion of the building. On this floor are also located the private office, the rug storage room, trunk room and a large work, receiving and packing room. Adjoining the men's locker room are the toilet and shower room. The piano storage room is on the second floor immediately above the office portion. The vault is constructed according to the

best bank standards and is equipped with a heavy bank vault door.

The typical floors contain a large number of storage rooms about 7'-0" x 13'-0" in size and the balance of the rooms are 10'-0" x 10'-0", more or less. The room partitions are made of 4"



PLOT PLAN

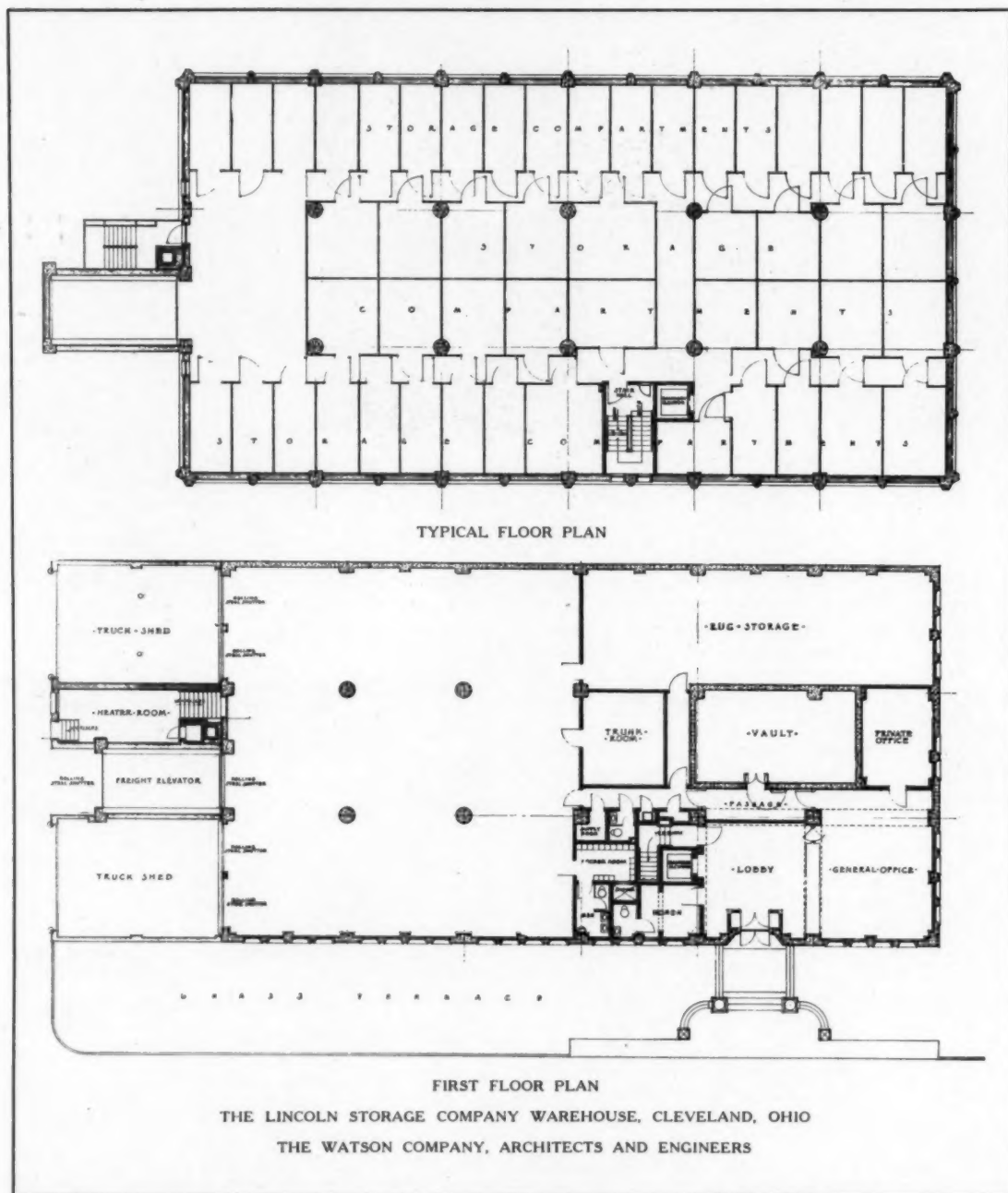
hollow tile, the doors are tinclad hung on structural frames. The main aisles are 4'-0" wide and connect with an ample open space in front of the freight elevator. An interior enclosed stairway and exterior fire escape constitute the exits.

The floor construction is a reinforced concrete flat slab supported by columns spaced 20'-0" on centers in both directions. The floors are designed for a live load of 125 pounds per square

THE AMERICAN ARCHITECT

foot in all stories. This load is somewhat heavier than is usually allowed for such an occupancy. It was found that the cost in excess of that of a floor designed for a 100 pound live load was in-

The outstanding feature of the exterior design is the setting out of the columns beyond the face of the wall. The ends of the floor slabs are located back of the brick wall face so that no horizontal



considerable and it was decided to provide for the more heavy load.

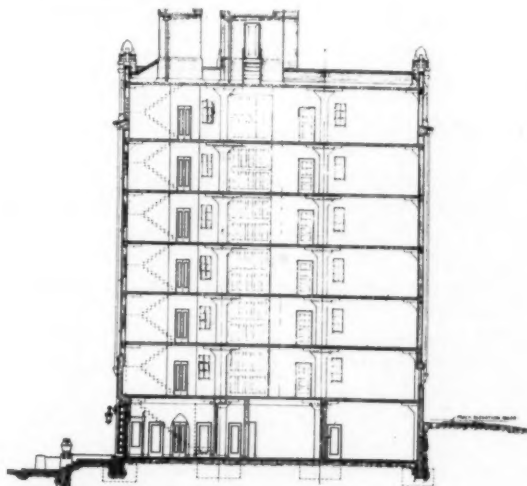
Heat is provided throughout the first floor and to a limited extent in the upper floors.

structural members are exposed at the floor levels. This arrangement of the structural parts permits of long, narrow, unbroken vertical panels of brick wall between the columns. Above the seventh



THE PRIVATE OFFICE

floor a concrete belt course extends entirely around the building.



TRANSVERSE SECTION

Between the principal columns in the exterior walls is placed a smaller column in the center of

each bay. All of these columns are load-bearing. These intermediate columns terminate well below the parapet coping, while the principal columns extend above the coping, finished with suitable terminants. The exterior walls of the first and the major portion of the second story are made of solid concrete. The entire exposed surface of these walls was tooled with pneumatic hammers, after they were sufficiently hardened, and a rubbed edging was left around all of the door and window openings. This differentiated the finish sufficiently to produce a decidedly pleasing effect. The exposed surface of the exterior columns and ornaments was left practically

as it came from the forms, which gives to it a softened effect, contrasting agreeably with the tooled face of the lower wall and the face brick of the panels. The brick wall panels are faced with culls of Kittanning gray brick backed up with 8" hollow tile. These culls were procured at a very low cost. Polychrome tiles were used for the insert panels placed between the bases of the principal exterior columns. Insert panels of precast concrete are placed on both sides of the terminals of the intermediate exterior columns. The use of tooled face, rubbed and form-rough surfaces for the exposed concrete with the rough gray face brick, produces a color scheme which is entirely acceptable. The simplicity of the design, the fine proportion of the parts, the colors and textures, produce an ensemble that is dignified and strong, yet graceful and charming. This building, with its well designed approaches and landscaped setting, is well placed in any location and with any class of buildings. Mr. George A. Rutherford is President of the Lincoln Storage Company and also President of the George A. Rutherford Company, building contractors, who constructed the building.



STRENGTH OF BALUSTRADES

ORDINARILY one does not question the stability of a balustrade, especially when it is made of stone or concrete. Balustrades of these materials have an appearance of being substantial and their known weight gives the impression of a substantial static resistance to an overturning effort. A recent occurrence emphasizes the importance of giving this matter proper consideration. A skidding taxicab went over the curb, crossed the sidewalk and knocked out a portion of the balustrade on the Hampden County Memorial Bridge at Springfield, Mass.

By a simple and ingenious method the resistance of the balustrade to an overturning force was measured. An inclined wooden plank was butted against the base of the balustrade with its top attached to the handrail with an iron tie rod. To the outer end of the inclined plank was suspended a sand box. The horizontal projection of the plank was 11'-0" and the height of the tie rod above the toe of the plank was 3'-5½". Under the weight of the plank and empty sand box there was exerted a horizontal pull on the handrail of 73 lb. per running foot. This load caused a deflection of from ¼" to ⅝" and the joints between the balusters and the base or bottom rail opened appreciably. A half pail of sand was then poured into each box and after two to five minutes a section of the railing failed. Within a half hour the balance of the test section failed. The pressure applied was 91 lb. per lineal foot of balustrade.

Tests were made as to the pressure exerted by crowds of people such as might be on the bridge to view some spectacle. A 10'-0" section was built up identical with the bridge balustrade. To this section was attached a system of loading levers. Seven men pushing moderately exerted a pressure of 50 lb. per running foot and when pushing hard, the pressure ran up to 81 lb. Fourteen men in two lines produced a pressure of 81 lb. pushing easily; 95 lb. pushing moderately, and 110 lb. when pushing fairly hard. Fifteen men exerted pressures of 124 and 139 lb., and 20 men in three lines, pushing hard, developed a pressure of 168 lb. per running foot.

As a result of these tests it was decided to replace the balustrade with a new one, but not one sufficiently strong to resist the impact of automobiles. To overcome this possibility a new reinforced concrete curb 12"x12" in size was made to replace the old curb which was from 5" to 6" high.

In reconstructing the balustrade there were precast 1¼" holes which extended through the base course, the balusters and into the handrail. In this hole was grouted a ¾" round rod which tied the parts of the balustrade together and anchored it to the bridge floor. The balustrade was divided into panels consisting of 5 balusters between which

were precast newel posts 20" long and 8½" thick anchored with ¾" rods. The balustrade anchored in this manner would have a horizontal resistance of about 360 lb. per running foot—four times as strong as the old railing.

The cost of the new balustrade is \$12,000 and the new curb \$6,000. The bridge is 1,500'-0" long. This is apparently the first attempt to measure the pressures exerted against balustrades and this data should be considered when they are being designed.

DETERIORATION OF SHEET LEAD IN CONTACT WITH PORTLAND CEMENT MORTAR AND CONCRETE

REQUESTS are received at the Bureau of Standards from time to time for information on the question of the deterioration of sheet lead when in contact with Portland cement mortar and concrete. Some two years ago this question came up in connection with lead sheathing on power cables and in co-operation with an electrical power company a few exposure tests were made on specimens of lead sheathed cables.

Six pieces of cable, about one foot long and with one end soldered, were imbedded to a depth of nine inches in a stiff Portland cement mortar made of one part cement and two parts sand. The mortar coating was ¾ inch thick and the soldered ends were placed in the mortar. Three specimens were coated with plain mortar and three were set in mortar containing 2 per cent of pulverized sodium silicate (per cent by weight of cement). One of each type of specimen was stored under three conditions of storage, as follows: air of the laboratory, the specimen being wetted occasionally; immersion in water to within one inch of the top of the mortar; and moist air of a damp closet.

After two years and three months exposure to these conditions the mortar coating was removed and the lead sheathing examined. The specimens under dry storage were practically unaffected with the exception of a very slight yellowish tinge on the surface of the lead. The specimens stored in water showed only a trace of oxide near the top line but were free from this over most of the surface. There was apparently some electrolytic action near the soldered end where the lead was bright and slightly surface eaten or pitted. The specimen encased in the plain mortar showed slightly more attack than the sodium silicate mortar specimen. The two specimens in the damp closet were more or less covered with a hard but thin coating of yellow oxide. The coating on the plain specimen was slightly heavier than on the sodium silicate specimen especially near the top

and bottom. Signs of pitting were apparent only in one area on the plain specimen.

These limited tests show that corrosion of lead occurred in contact with the mortar and that the addition of the sodium silicate to the mortar did not make a marked difference in results.

In view of the wide use of sheet lead in shower bath installation and from the above test results the Bureau of Standards makes the following suggestions in order to obtain satisfactory installations; That not lighter than six pound lead be used and that the sides be turned up at least two inches above the floor level. The corners should be turned up and not soldered. The concrete base upon which the lead pan is laid should have a smooth finish and be given a coating of bituminous paint before the pan is set. The top of the pan should have a similar coat before the topping is lead. The topping used above the pans should be 1:3 cement sand mortar and during the laying of this care should be taken to protect the weep holes in the trap by some means as placing a layer of gravel about $\frac{3}{8}$ inch size around the trap for a considerable area.

THE STRENGTH OF HOLLOW TILE AND REINFORCED CONCRETE FLOOR SLABS

THE Bureau of Standards, in co-operation with the Hollow Building Tile Association, recently completed a series of tests on specimens of combination hollow tile and reinforced concrete floor slabs, reinforced in but one direction. The tests were planned to determine the extent to which the tile could be relied upon in resisting bending and shearing stresses.

Forty-four slabs, varying from 8 feet 10 inches to 15 feet in length, with a total depth of 8 inches, and a maximum width of 30 inches were tested. The combination slabs consisted of two 4 inch concrete ribs separated by a single row of tile, laid with their cells parallel to the length of the slabs, and enclosed on each side by a row of tile sections which had been cut to include nearly one-half their original width. In some of these slabs 8 by 12 inch tile were used without a topping, and in others 6 by 12 inch tile were laid and covered by a 2 inch concrete topping. For comparison 2 inch solid concrete slabs having the same gross sectional area as the composite slabs, and 3 inch solid concrete beams having the same sectional area as the area of the concrete ribs in the composite slabs were tested. A greater amount of tensile reinforcement was used than is ordinarily employed in practice in order to prevent the failure of the steel before high stresses in the concrete and tile had been developed.

The specimens were tested in a vertical-screw beam-testing machine having a capacity of 600,000

pounds. The deformations in the concrete, tile and steel, and the deflections of the slabs were measured as the loads were applied. By changing the positions of the loads, bending and shearing stresses several times greater than working stresses for concrete were developed.

It was found that the bond between the concrete and tile was sufficient to cause the tile to assist materially in resisting both bending and shearing stresses. The value of the tile in beams without a concrete topping was almost directly proportional to the modulus of elasticity of the tile. When medium or hard tile are used, it appears that the shells of the tile which are in contact with the concrete are as effective as an equal width of concrete would be. A report on these tests is now being prepared for publication.

USE OF HYDRATED LIME IN PORTLAND CEMENT MORTAR

IT is quite common practice to add hydrated lime to Portland cement mortar, to improve its working qualities, while on the other hand Portland cement is added to lime mortar to hasten its set and increase its strength. The quantities of each material vary with the locality and the opinion of the user. Obviously there is a mix best adapted for given conditions. The determination of these mixes has been the subject of many investigations covering a number of years. An investigation has been completed at the Bureau of Standards, dealing with the measurement of plasticity, time of set, yield, shrinkage, and tensile strength, together with a resume of the literature upon these subjects. Many interesting points have been brought out, including:

(1) The richer the cement mortars, and the higher the percentages of lime which they contain, the more mixing water is required to bring them to a given consistency.

(2) A cement mortar to which lime has been added requires additional water, but this additional water increases shrinkage possibilities; therefore lime should be limited in cement mortars where it is desirable to keep the shrinkage low. The principal advantages of the lime are that it increases workability, tends to prevent segregation and may reduce permeability if used in the proper proportion. Lime retards the set of cement mortars.

(3) The substitution of lime for an equal volume of cement always results in a decrease in strength. The substitution of lime for an equal weight of cement cannot be expected to increase the strength of a cement mortar which is richer than 1:4.

(4) The desirable properties of cement-gauged

THE AMERICAN ARCHITECT

lime mortar are short time of set, strength, elasticity, and workability.

A study of the literature indicates that: Inert, powdered admixtures possess positive merit for reducing permeability of mortars to water when applied to mortars that are not too rich; the strongest mortars may not always have the greatest adhesion; extra sand reduces adhesion of mortars; the strength of masonry depends upon the strengths of brick, mortar, and bond between mortar and brick.

TIGHT PIPE JOINTS WITH LEAD FILINGS

A HEATING contractor recently informed the Bureau of Standards that he had found lead filings taken from an ordinary lead pipe by a coarse rasp, and sprinkled onto the threads of a pipe joint, (being held on, while screwing up the joint, by the cutting oil used or by the ordinary white or red lead joint paste) gave a tighter joint than the paste. The lead alone without any paste was said to be satisfactory, and such joints were said not to stick and be difficult to unscrew as in the case with old joints on which the paste has been used.

The contractor suggested that the Bureau try out the method and pass the idea on to others if found useful.

Since the method was new to the Bureau and the idea of forming a lead gasket within the threads seemed to offer a promising method of obtaining a tight joint, a few joints were made up and tested for tightness. A white lead joint paste in use in the Bureau plumbing shop was used. Joints with this paste, with paste plus lead filings and with lead filings alone were made up on half inch pipe by the Bureau plumbing shop, tightening each joint to the same degree as nearly as the operator could judge.

The joints were allowed to set for a week and were then tested under water pressure with a pump by which the pressure could be raised to 8500 lbs. per sq. in. Half of the joints made with paste leaked below that pressure, one failing at 1050 lbs. per sq. in. One of the joints made with both paste and lead filings leaked at 3900 lbs. per sq. in., but those made with lead filings alone uniformly withstood the full 8500 lbs. per sq. in. without leaking.

The force required to unscrew the joints was measured, and while it took more force to unscrew the lead or lead and paste joints than the paste joints, this observation is not believed to be in conflict with the previous observation because these paste joints were relatively fresh and not set as hard as they would become in time. The lead

joints all unscrewed readily and it is obvious that the condition of such a joint will not change with time to any such degree as will that of a paste joint.

While this shop kink may have been used before, it was new to the Bureau and appears worth consideration, as the tests indicate a decided superiority over the usual methods.

CO-OPERATIVE RESEARCH ON THE USE AND MAINTENANCE OF MARBLE FOR INTERIOR WORK

A NEW co-operative research has been started at the Bureau of Standards, through the initiative of the National Association of Marble Dealers, which relates to some practical problems in connection with the use and maintenance of marble for interior work. The scope of this research includes the study of cleaning preparations, their relative value and ultimate effect on the marble, the removal of various kinds of stains, the cause and prevention of discolorations which sometimes come through the marble from the walls of the building, and the study of a rare type of decay which occasionally occurs where marble is used under unfavorable conditions, as on damp walls below grade.

Prompted by the desire to give their customers the best information available in regard to the proper installation and subsequent care of marble, the marble dealers have, through their Association, requested the Bureau of Standards to co-operate with them in a comprehensive study of all the problems involved. The results of the investigation will be made available to the public as soon as the work is completed, and it is hoped that considerable information will be developed which will increase our knowledge of this important building material.

PECULIARITY IN THE EXPANSION OF IRON AND STEEL

A N Italian metallurgist has reported an anomaly in the thermal expansion of iron and low carbon steels around 698°F. when sufficiently accurate expansion measurements are made. Some specimens studied at the Bureau of Standards some time ago indicated a thermal change below 932° F. but later repetition of the thermal study failed to show it. It is possible that these effects may be due to hydrogen, and work is under way to study the expansion by direct length measurements and by the interferometer method of specimens heated in hydrogen and cooled in it. Further extension of the work will be made if the results warrant.

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WEIGHING the MOUSE*

THERE is a story about a number of scientists, who spent many months in conference, debating whether a mouse weighs more alive or dead. Many learned papers were read, charts exhibited, and theories defended. The controversy all but wrecked three mighty empires. Everybody took sides. Finally the king's jester, who might have registered about twelve years in an intelligence test, settled the argument in an astonishing manner. He caught a mouse and weighed it. Then he killed the mouse and weighed it again. He proved that a dead mouse weighs just as much as a living mouse.

The same might be applied to matters of church building. Committees might be mentioned who have spent months in debating theories. One committee has been meeting periodically for two years, debating whether or not the side walls of a clerestory type of church ought to be higher than their distance apart. Not a brick has been laid, pending their decision. A second committee is deadlocked over the question of a sloping floor. The saddlemaker on the committee has made a dozen diagrams. The cigarmaker roars like a lion at each meeting. The popular village undertaker has been losing sleep over it, and the baggage-master at the Pennsylvania Lines station, who is also a member of the building committee, has covered reams of paper with figures.

If the good folks in question might only be persuaded to weigh the mouse, by visiting a few good churches and seeing things in three dimensions, the whole matter might be settled within an hour, in each case. The clerestory argument might be settled by visiting any one of several good examples of clerestory churches close by. The committee deadlocked on the sloping floor might, within an hour, measure and try out half a dozen churches in their own town with level floors, and half a dozen with sloping floors.

A man was called to another city not long ago to settle one of these sloping floor arguments. After listening to the debate for a time, he borrowed a carpenter's level, a tape line and a pocket rule, conducted the committee to a church nearby, and proved to them by simple arithmetic that the sloping floor in question gave each person an advantage of just seven-sixteenths of an inch over the man ahead of him. And what good will seven-sixteenths of an inch do, if you have a big hat in front of you? Is it not better to elevate the altar and pulpit a step or two? Whoever heard (outside of a church) of asking a speaker to seek a lower level, in order to make himself more

visible? Rather do we ask him to step up on something. Speakers are made more visible by elevating the speaker—not the hearers.

Another specific case is the everlasting argument about the relative merits of plastered ceilings and wood ceilings. Theorists without training tell us that a church ought to have a plastered ceiling, suspended six or eight feet below the true one. It saves heat-leakage, they declare. We will not deny that a layer of *six or seven inches* of dead air space between a ceiling and the roof boards acts as an insulator. But we *do* deny that 20,000 cubic feet of dead air between the ceiling and the roof, the dead air about zero in temperature, is a good thing to have overhead. And a pocket of 20,000 cubic feet of air, warmed to a temperature of 120 degrees F., under a slate roof, is not the coolest thing in the world on an August day.

And yet most committees are willing to argue night after night, until the clock in the steeple strikes one, for their flat ceiling. Half a dozen thermometers, judiciously placed in the pews of half a dozen different churches on an August day, will tell the tale better than arguments, and some salesman's logarithm tables.

If your committee is agitated over some such momentous question, weigh the mouse. Compare a church with great, gaping basement windows, with one where the windows are let down into properly constructed light areas.

If somebody objects to thirty-inch stone columns, on the supposition that they obstruct the view of altar and pulpit, visit a church with thirty-inch columns, and try it out. In other words, weigh the mouse, and thus convince the butcher, the baker, and the radiomaker on the building committee that a first-class architect is perfectly sane, even though he shows a wood ceiling, light areas, interior columns and a level floor on his working drawings.

MARCH MEETING OF PHILADELPHIA CHAPTER. A. I. A.

NEARLY sixty members of the Philadelphia Chapter, A. I. A., met in the new Benjamin Franklin Hotel on March 25 last, before 5:30 o'clock and, through the courtesy of the management, made an examination of the building. After dinner, the business of the meeting was proceeded with, President Paul A. Davis in the chair.

Dr. Paul Cret presented a paper on The Trend of Modern Architecture. He said that modern

*From *Lutheran Church Art*, March, 1925.



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architecture is influenced by commercialism which demands speed of erection and cheapness. "Modern methods" according to Dr. Cret are causing decay in craftsmanship among artisans, among contractors and among architects.

Another influence on modern architecture, he said, is the attempt to adopt new materials to forms traditionally used for other and different materials. The future, according to Dr. Cret, will probably cast aside these old forms and develop new ones more suitable to the material.

After simplifying craftsmanship in building Dr. Cret expects that more possibilities than have been seen so far will be developed from the modern system of structural construction and does not believe the forms of beauty are exhausted.

Prepared discussion was presented by Arthur I. Meigs, Leicester B. Holland and Wm. Pope Barney each of whom was alternately brilliant, cynical and prophetic with a decided tinge of pessimism. Various points of view, including optimistic notes, were then presented by George Howe, Albert Kelsey, Clarence G. Zantlinger, Robert R. McGoodwin and D. Knickerbacker Boyd.

ASBESTOS HAS MANY USES

A FIBRE incombustible and indifferent to fire, time and weather, a poor conductor of heat and electricity, enduring and yet capable of being spun into threads of considerable strength and woven into cloth must needs be of great economic importance. This fibre is asbestos, and as Canada produces more than 75 per cent of the world's supply, and this entirely from the eastern townships of the Province of Quebec, the mineral is of special interest to Canadians. The only other countries which compete in the world's markets for asbestos are South Africa, Rhodesia and Russia.

The discovery of this material is credited to the Romans, who used it in cloth and for lamp-wick, but the knowledge of its existence apparently lapsed. In 1720 it was found in the Ural Mountains in Russia, but at that time its uses were limited and the industry almost disappeared. The first modern attempt to exploit asbestos commenced in Italy in 1860, but only a comparatively small quantity was produced, and this at very high prices. About the same date primitive development of an asbestos discovery in the Des Plantes River region in Beauce County, Quebec, took place, but it was not until 1877 that the mineral was found in the serpentine hills of Thetford and Coleraine in the eastern townships of that Province, the source of practically all of the Dominion's present output.

The following year mining operations were

started on a small scale. Several years later shipments of the better grades—that is the long fibres—to the London markets aroused almost immediate interest in the product. A rapid development of the asbestos mining industry followed.

A non-combustible material of such flexibility as asbestos naturally lends itself to a wide range of industry. Its special value as an insulating and fireproof material has been, however, mainly responsible for its widespread use.

The best grades are used in the manufacture of brakes for automobiles and elevators. The yarn made from the long fibre is woven into cloth which is used in the manufacture of fireproof theatre curtains, wall coverings, curtains and other products. Coated with rubber it is used for gaskets, sheet packing, etc., and for high-pressure steam systems.

The greater part of the output consists of fibres of short length which is known as mill-stock and which enters into the manufacture of mill-board, paper covering, etc. Large quantities of asbestos cement shingles and asbestos lumber or wood, manufactured from mill-stock, are being used today in the building industry. One of the principal applications of asbestos is as an insulating material to prevent radiation of heat from pipes, boilers, tanks, etc. Practically every locomotive has its boiler blanketed with asbestos. As an electrical insulator asbestos has many uses, especially in the manufacture of switchboards and fittings. When made into board it is used for joint packing for steam pipes, cylinder covering, etc. Enormous quantities are used for lining oven doors and in other ways in the stove industry.

Many uses are found for the mineral in the form of household conveniences, such as table mats, iron holders, etc., in which form it is more intimately known to the general public.

YEAR BOOK OF THE NEW YORK SOCIETY OF ARCHITECTS

THE 1925 volume of the Year Book of the New York Society of Architects is the fourteenth annual issue of a work that has become as necessary in the offices of the members of the Society, and in many offices not affiliated, as the dictionary or the encyclopaedia. In fact, this valuable volume is, in a sense, both a dictionary and an encyclopaedia. It answers every question as to the practice of architecture, whether as to the laws governing the profession, the city codes, registration, ethics or any or all of the many and diverse things on which the modern architect must have reliable information.

Copies may be had from the offices of the Society, 29 West Thirty-ninth Street, New York City.

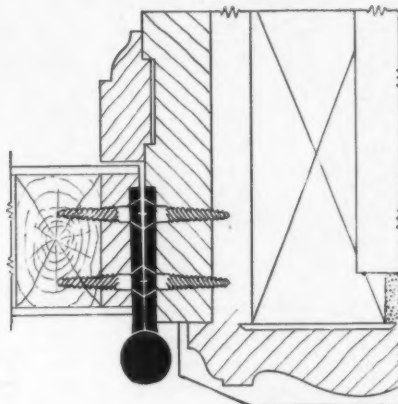
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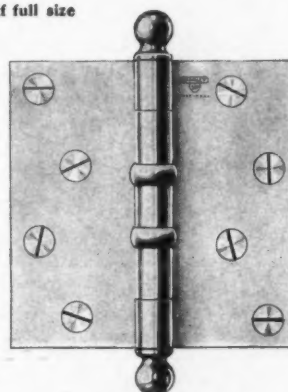
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THE ROYAL GOLD MEDAL FOR ARCHITECTURE

INTIMATION has just been received, states *The Architects' Journal*, London, that His Majesty the King has approved the award of the Royal Gold Medal to Sir Giles Gilbert Scott, R.A., F.R.I.B.A., in recognition of the merit of his executed work. The medal will be presented to Sir Giles Gilbert Scott on Monday, June 22.

WORLD'S FAIR RELIC BURNS

A SPECTACULAR fire recently practically destroyed the German building built in 1892 and one of the few survivors of the World's Fair, Chicago. Firemen believe the blaze may have been started by tramps who sometimes frequented the building.

Hundreds of persons saw the ornate tower, patterned after that of the Town Hall in Rothenburg, Germany, go crashing through the roof and on through successive floors to the basement.

The building which cost upwards of \$300,000 when constructed, embodied three types of German architecture, one side representing a town hall, another a typical residence and a third a church.

PROBLEMS OF STABILITY

TWO of the outstanding architectural features of London, St. Paul's Cathedral and Waterloo Bridge, each fulfilling the double service of practical use and artistic value, are the subjects of conflicting judgment by experts, states *The Builder*, London. It is maintained that St. Paul's dome can be rendered perfectly safe by remedial measures now applied, and it is also claimed that Waterloo Bridge could be made safe without being taken down. Against this view, we have the considered opinion that neither of these things can be done. That the weight of the St. Paul's dome could be better distributed than is now the case there can, we think, be hardly any doubt; and that the retention of Waterloo Bridge is not an insoluble problem we have enough confidence in modern engineering skill to believe. Would American engineers despair in either case? We are glad to note that the advisory committee for the Cathedral authorities has been strengthened by the inclusion of Mr. William Dunn, whose combined knowledge of both architectural and engineering problems is probably unique.

PERSONALS

H. M. Miller, architect, has moved his offices from 3½ Campbell Avenue to 731 Anchor Building, Roanoke, Va.

James J. Marley, architect, has opened an office for the general practice of architecture at 5 North LaSalle Street, Chicago, Ill.

Roy L. Jones, architectural designer, has moved his office from 311 South Western Avenue to 1555 North Western Avenue, Los Angeles, Cal.

Sorey & Vahlberg, architects, have moved their offices to 406-407 Braniff Building, Third and Robinson Streets, Oklahoma City, Okla.

H. V. von Holst, architect, has moved his office from 72 West Adams Street to Suite 914, 79 West Monroe Street, Chicago, Ill.

Ben H. Byrnes, architect, has opened an office for the general practice of architecture at 312 National Bank of America Building, Salina, Kansas.

John Calvin Stevens, F. A. I. A., and John Howard Stevens, architects, are now located in Room 711 Chapman Building, 477 Congress Street, Portland, Maine, having moved their offices from the Oxford Building, that city.

Announcement is made of the establishment of the firm of Baker, Slifer & Buell, architects, engineers and builders, with offices at 45 Park Place, Morristown, N. J. Manufacturers are requested to send catalogs and samples.

R. Maury Browne, architect, has recently severed his connection with the architectural firm of Peebles & Ferguson, Norfolk, Va., and has established offices at 711 National Bank of Commerce Building, that city. Manufacturers' catalogs and samples are requested.

Anthony J. DePace, architect, formerly specification writer and in charge of several offices and later with Cass Gilbert, announces the opening of his office for the general practice of architecture at 110 West Fortieth Street, New York City. Manufacturers are requested to send catalogs and samples.

Lorentz Schmidt, C. F. Boucher and H. G. Overend announce the formation of the firm of Schmidt, Boucher & Overend, architects, Fourth National Bank Building, Wichita, Kansas, to continue the architectural practice carried on by them under the firm name of Lorentz Schmidt & Co.

The PUBLISHERS' PAGE

IT was certainly a very nice party. We're writing now about the Convention of the A. I. A. and the International Exposition.

The booth of *THE AMERICAN ARCHITECT*, generally acknowledged to be one of the artistic features of the event was thronged with visitors. Met many old friends. Don't quite know which we would rather do,—renew old acquaintances or make new ones. Now that the excitement has died down and we are back,—we hope,—to a normal state, we want to resume our intimate chats with readers about the present issue and those yet to come.

* * *

For many years *THE AMERICAN ARCHITECT*'s reports of Institute conventions have been regarded as accurate and valuable records of events that are of prime interest to all readers. We believe this issue will be found equally valuable. And, also for many years, *THE AMERICAN ARCHITECT* has pictorially presented the exhibitions of The Architectural League of New York. This year these two important events in the field of architecture are so intimately related one with the other that they cannot be separated.

* * *

In this issue there appears all but the last day of the convention. That was so closely crowded with many important happenings that we postpone its reference until our issue of May 20. The presentation of the Institute's Gold Medals for 1924 and 1925, held at the Metropolitan Museum of Art was one of the most distinguished ceremonies New York has witnessed. We are sure you will be interested in hearing about it. And also in the May 20 issue there will be the final presentation of the International Exposition exhibits.

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Looking into the future, we have so great an

amount of material that we are sure our readers will find that no lack of interest will be apparent.

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The series dealing with the intimate relation between the work of the landscape architect and the building architect is now in preparation. These articles, written by P. H. Elwood, Jr., professor of landscape architecture at Iowa State College, will be of more than passing interest.

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Professor Ralph Adams Cram is back from Spain. He's been taking notes and he's going to print some of his impressions in later issues. Just at this time when the Spanish influence is so strong, these articles will offer a wide field of practical suggestion.

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Harking back to our May 20 issue, Alfred H. Granger, President of the Chicago Chapter, A. I. A., while in New York during convention week, found time to prow around among our architectural byways. His impressions of what he

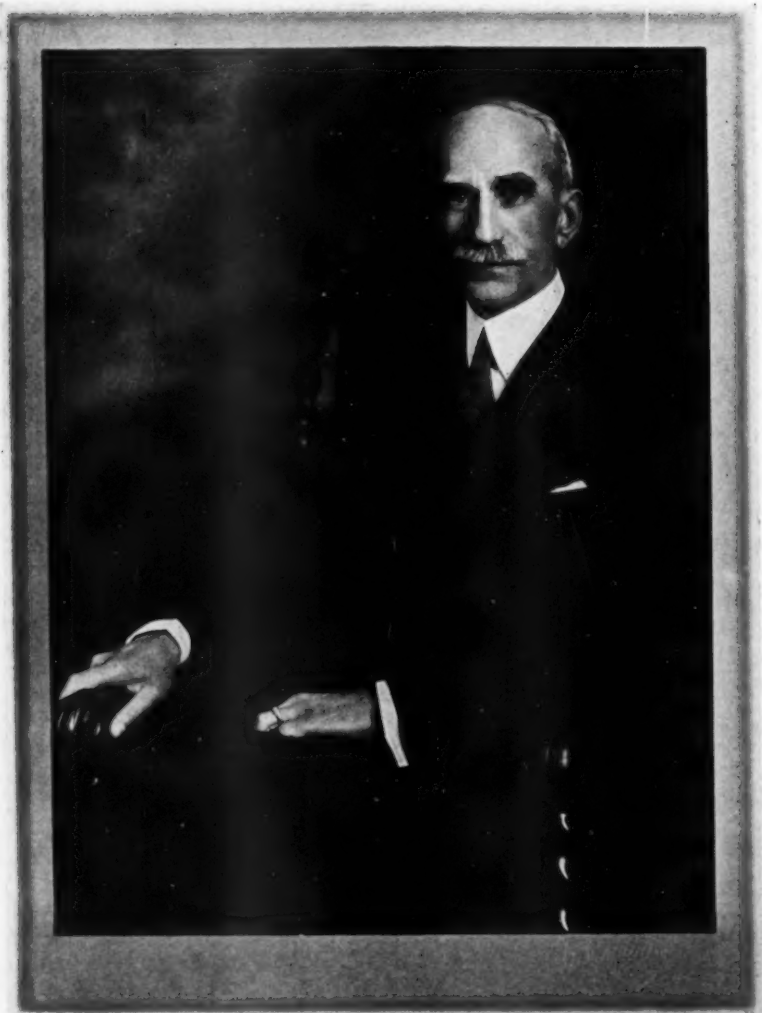
saw and his reactions have been set down in a very readable way. We are sure you will enjoy reading Mr. Granger's article.

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It was interesting to learn, while talking with visiting architects, of their reactions on their visit to New York, in some cases after a lapse of more than ten years. The constant dweller here evidently does not appreciate how fast we are growing or how fine architecturally.

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Summer will soon be here and many of us away to our usual haunts. You'll find *THE AMERICAN ARCHITECT* good reading all Summer. If you like, we will send it to your Summer address. Just tell us where and our subscription department will do the rest.



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RE-ELECTED PRESIDENT OF THE AMERICAN INSTITUTE OF ARCHITECTS

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